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Do Left and Right Differ on Education in Latin America? Explaining Unexpected Convergence

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by

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DISSERTATION

Presented to the Faculty of the Graduate School of

The University of Texas at Austin

in Partial Fulfillment

of the Requirements

for the Degree of

DOCTOR OF PHILOSOPHY

THE UNIVERSITY OF TEXAS AT AUSTIN

December 2019

Dedicated to my former students at ASCS.

Acknowledgments

In writing this dissertation I have incurred a lengthy list of intellectual and emotional debts. This is my attempt to acknowledge the many people who contributed to this project in ways large and small.

First, to Wendy Hunter, my chair and advisor, who has supported me since my first day in graduate school. Wendy helped to get this project off the ground and see it through to the end, going through lengthy rounds of revisions offered with saint-like patience to an often slow learner. Her advice has shaped my thinking throughout this project and helped me to navigate the turbulent and often frustrating waters of graduate school. I am enormously grateful to her for her academic and professional mentorship.

To the other members of my committee — Amy Liu, Raúl Madrid, Leticia Marteleto, and Chris Wlezien — whose classes and advice along the way have shaped my thinking and paved the way for this project to take shape. Amy's willingness to take me on as a coauthor helped me to develop my research skills. Raúl's class on democratization, Leticia's on international education, and Chris's on public opinion and public policy all contributed to different aspects of the final product.

To John Gerring, who has taught me an untold number of lessons about what it means to be a researcher. John's curiosity into such a wide range of political questions fueled my own curiosity and his persistence in the face of journal and grant rejections encouraged me to press forward in my project, even when I encountered roadblocks.

To my dear friends and roommates, Iasmin Goes and Daniel Weitzel, who have been wonderfully supportive both emotionally and intellectually. They have both read drafts of various chapters and given thoughtful feedback. Over many a good meal they have listened and shared and laughed. They are both, always, deserving of the roommate of the month

award.

To the community of Latin American scholars in the Government Department who have all contributed to my thinking on these questions through myriad conversations in formal and more relaxed settings. At risk of forgetting anybody, this group to whom I owe thanks includes Giorleny Altamirano, Omar Awapara, Kate Bersch, Tommy Burt, Rodolfo Disi, Alex Hudson, Calla Hummel, Riita Koivumaeki, Carolina Moehlecke, and Diego Vega. Caitlin Andrews-Lee and Jake Dizard also deserve special thanks for taking the time to offer insightful comments on previous drafts.

To my parents, Mike and Mary Ann, who inspired in me a love to read and to learn, who taught me to be curious, who set me up for academic success, and who encouraged me through all my times of struggle. To my sister, Bridget, an ever-supportive sibling who has so often offered her keen eye in revising my writing, previously unacknowledged. To my brother, Christopher, who has always inspired me, even without knowing it.

To the Loose Sprockets, Brian and Jen, without whom, I can confidently say, I would never have reached this point.

To my friends in my cohort, who stuck around until the bitter end: Thomas Bell, Christina Bambrick, Alec Arellano, and Ross Buchanan. And to Alex Branham, a dear friend, coauthor, programming mentor, and fellow trivia-enthusiast.

To the "Chile" crew, who were with me on so many of the adventures that sent me down this path and who have continued to make memories on this continent — Allison and Tim, Christy and Ryan, Jill and Jarrett, Nellie and Todd, and Robin and Ravi.

To those in Chile who provided me with invaluable insight, helpful contacts, and general support, especially Esteban Montes, Estela Rojo, and Rosanna Castiglioni. And to my friends and hosts in Argentina, Sebastian and Candelaria who offered hospitality and friendship.

Finally, to Annette Park, whose unmatched efficiency makes the graduate program run.

Do Left and Right Differ on Education in Latin America? Explaining Unexpected Convergence

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The University of Texas at Austin, 2019

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What effect does partisan ideology have on education outputs (spending) and outcomes (access and quality) in Latin American democracies? Political left and right are defined based on divergent beliefs about inequality. Given that education has been touted as being essential for poverty reduction and equity enhancement, does the left devote greater resources to this sector? Previous work in the OECD has found that the left outperforms the right in this way. Do Latin American countries follow the same pattern? Within the education budget, the left may also be expected to devote greater resources to primary and secondary education (because these levels are more progressive than tertiary) and to staff expenditures (because of the left's historical connection with the teachers' unions). Is this expectation borne out in reality? Further, do left and right produce systematically different education outcomes? Are students more likely to enroll and complete their education and are they more likely to learn more under either end of the political spectrum? This project attempts to answer these questions.

I find that contrary to expectations, there are no systematic differences between left and right on either education outputs or outcomes. I argue that this surprising result is due to three political factors: policy legacies, stakeholder pressures, and expert advice. These forces push left and right toward similar education policies, which in turn result in convergence on observed outputs and outcomes. Policy legacies limit the scope of potential

policy reforms through bureaucratic inertia, short-term political and capital costs, and practical constraints. Powerful vested interests, namely the teachers' unions, place pressures on both left (their traditional allies) and right that cannot be ignored. Other organized actors, including business elites and parents, also have the ability to pressure politicians, but are secondary actors in this area. Finally, technocratic experts recommend policy strategies that remain consistent regardless of the ideology of the party in power. An increasing tendency by both left and right to rely on these experts further contributes to convergence.

I explore this alternative theory of convergence in Chile, tracing education policy since the return to democracy in 1990. I find that the center-left and left were severely limited by the policy legacies of the military regime as well as electoral pressures from the teachers' unions and students. A willingness to rely on technocratic expertise also encouraged the left to converge on many education policies with the right. The left was only able to address equity through small, targeted programs. After 24 years of democracy, policy legacies had weakened and electoral pressures changed sufficiently that a more strongly left government was able to ignore expert advice and push through policies in line with ideological preferences. These new policies have already left legacies of their own that have constrained the governments of the right.

This project seeks to contribute to an understanding of partisan politics in Latin America and an emerging literature on the politics of education.

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Chapter 1

Introduction

Education is an inherently and intensely political endeavor, intimately connected to nation-building, economic development, and human rights. All governments can use the education system to propagate political values and develop citizens in the image of the regime (Paglayan 2018; Farnen and Meloen 2000) and contribute to nation-building efforts (Bendix 2017). Education is often lauded as the pathway out of poverty for individuals, and a force for economic development and equity enhancement for nations (Psacharopoulos and Patrinos 2004; Hanushek and Wößmann 2007; Woessmann 2016). Finally, education is a basic human right (UN General Assembly 1948). The Millennium Development Goals (MDGs) set universal primary education as one of their metrics (World Health Organization et al. 2008) and their replacement Sustainable Development Goals (SDGs) added universal secondary education to this list (UN 2015). For these reasons, education and the politics that shape these education systems merit attention by political scientists.

Despite these political connections, the political science discipline largely ignored education as a research topic for several decades (Busemeyer and Trampusch 2011), an omission noted at least 30 years ago by Clark (1986). As Gift and Wibbels (2014, p. 292) write,

> Political science…is oddly underrepresented among social science disciplines in the study of education. It is hard to identify a community of political scientists who are dedicated to the comparative study of education, and the richest body of work is rather specialized in its focus on the OECD. By contrast, it is common for economics and sociology departments to have faculty who concentrate on domestic and international education, and it is easy to identify the relevant research communities.

Recent work in political science (e.g. Moe and Wiborg 2017b; Ansell 2010; Jakobi,

Martens, and Dieter Wolf 2010) has started to address the political connection in a more systematic way.[1] This recent wave of political science literature on education politics considers the subject from a more multi-faceted approach — the *politics* of education provision. This study looks to contribute to this new research agenda. It asks, what are the political factors that drive education outputs (spending) and outcomes (access and quality)? How does partisan ideology affect investments in human capital development and the learning outcomes that these investments produce? In short, is the political left or right better for enhancing education?

I investigate this issue with respect to Latin America. In looking at partisan determinants of human capital investment, this study extends recent scholarship. Much of this literature is focused largely on countries in the Organization for Economic Development (OECD).[2] This study strengthens the current scholarship by testing the robustness of current findings and whether the results in the literature are specific to the OECD. It is an open question whether the findings there also apply to the context of persistently high inequality in Latin America. This study addresses this limitation and brings the region the focus it deserves.

The existing scholarship has argued that political ideology drives education outputs[3] (e.g. Ansell 2008a; Psacharopoulos and Woodhall 1985). I present evidence that ideology explains very little in terms of either outputs or outcomes in Latin American education. This result is surprising — left and right have distinct beliefs about what education systems should look like, the appropriate relative size of the government, and the government's role in actively enhancing equity. Left and right also have divergent relationships with the teachers' unions

[1]This is not to downplay the important contributions of scholars looking at the politics of teachers' unions (Cook 1996), episodes of education reform (Grindle 2004), or the relationship between political factors and human capital accumulation (Brown and Hunter 2004). Rather, it is an argument that within the political science discipline, there has not been a systematic research agenda to look at the relationship between education and politics.

[2]A full list of acronyms used in this project can be found in Appendix A.

[3]Note that throughout I conceptualize education outputs and outcomes as education *policy* outputs and outcomes. That is, I focus on the political inputs and the consequences for education via policy. Thus where others describe spending on education as an *input*, I view it as a policy *output* and a result of a political process.

and form electoral coalitions consisting of distinct groups. I argue that a combination of policy legacies, stakeholder pressures, and advice from experts produces this convergence on education policy, which in turn produces convergence of both outputs and outcomes.

1.1 Expected Divergence Between Left and Right

I argue that there exist strong reasons to expect the left to outperform the right on metrics of both outputs and outcomes, as they have been found to do in the context of advanced industrial democracies. Left and right are defined by opposing views about inequality, which is purportedly tied to education. Further, left and right each form electoral coalitions from different segments of society, creating distinct policy pressures.

Differences in beliefs about the causes of inequality and the role of government in reducing (or not reducing) inequality are largely *the* defining characteristics of the political left and right (Ames 1987; Luna and Rovira Kaltwasser 2014; Bobbio 1996; Coppedge 1997; Castles and Mair 1984; Alcántara Sáez and Rivas 2006; Alcántara Sáez and Freidenberg 2001; Levitsky and Roberts 2011a). This serves as the basis of my definition between the political left and right. The left favors state intervention in reducing inequality of all kinds, including inequality of *outcomes* (Luna and Rovira Kaltwasser 2014). The right, on the other hand, views inequality as naturally occurring and either opposes government efforts to reduce inequality entirely or, at most, supports state intervention to ensure equality of *opportunity* (Freeden et al. 1996; Wiesehomeier and Doyle 2014). Note that "equity" is often defined as equality of opportunity and "equality" as equality of outcome and that the former is closely tied to ideas of justice, fairness, and inclusion (Simon, Malgorzata, and Beatriz 2007). For the purposes of this study, "equity enhancement" refers to improvements on *both* of these areas.

Other definitions of the differences between left and right are possible, but in the Latin American context no other cleavage so neatly divides parties into two camps or places them on compatible grounds with parties from other regions around the world (Coppedge 1997).

The left's foundational views on equity form the basis for the expectation that it will spend more on education and that this spending will decrease as party ideology shifts to the right. Previous studies support this expectation in the OECD (e.g. Ansell 2010; Garrett 1998; Iversen and Wren 1998). This spending pattern is expected to hold at the primary and secondary levels because of the left's focus on equity enhancement and its longstanding relationship with the teachers' unions. This relationship also produces the expectation that the left will devote a greater share of resources to teacher salaries. Further, the left's concerns about inequality lead to the expectation that it will produce more equitable outcomes in education than the right.

In contrast, the right is expected to spend less on primary and secondary education than the left because of its weaker relationship with teachers' unions and underlying beliefs about the state's lesser role in addressing inequality. The traditional wisdom also holds that the right's economic focus and preference for smaller government should result in more efficient education systems.

Left and right may have opposing foundational views of equity, but if partisanship can serve as an explanatory variable for policy outputs and outcomes, then there must be a consistent meaningful difference between left and right parties. In the past three decades there has been a shift toward greater levels of party institutionalization (Luna and Zechmeister 2005), although there remains variation in the degree to which the party systems themselves are institutionalized (Mainwaring 2018). As a result, partisan ideology is plausible as an explanatory variable.

1.1.1 The Left and Education

The left in Latin America includes established and institutionalized parties including Social Democratic, Socialist, and Communist parties. Some examples include the Broad Front in Uruguay (FA), Socialist Party of Chile (PS), and the Venezuelan Communist Party (PCV). The Latin American left also includes more newly established leftist parties. Exam-

ples include the Workers' Party (PT) in Brazil and the Movement toward Socialism (MAS) in Bolivia.

There are many reasons to expect that the left will dominate in primary and secondary education, investing more state resources and producing better outcomes. The left's decisions about education are driven by two primary components: ideological preferences based on a fundamental concern about *equity* and electoral pressures from their base constituencies. Empirical evidence — previous findings from other regions, the left's "ownership" of education, and a correlation between the left being in power and improved education metrics — provides further support for the expectations laid out in this section.

Ideological Motivations

Research has long found a positive connection between education and a reduction in poverty (Schultz 1961; Mincer 1984; Solmon 1985; Psacharopoulos 1995; Hanushek and Wößmann 2012). Equally, research has also found a positive connection between education and equity enhancement (Lustig 2015; Birdsall, Lustig, and McLeod 2011; Psacharopoulos 1977; Psacharopoulos and Patrinos 2004; Hanushek and Wößmann 2007).[4] Given that the political left is often regarded as more successful at reducing poverty and inequality than the right (Lustig 2009; Huber and Stephens 2012), it is reasonable to expect the left to outperform the right on a range of education metrics.

Education spending can be measured in either absolute terms — does the left devote more of the government budget to education than the right — or relative terms — within the education budget, does the left invest greater resources in a particular level or area than the right? Previous studies based on the OECD find the left spends more than the right either overall or on a subset of education levels (Garrett 1998; Iversen and Wren 1998; Iversen and Stephens 2008; Ansell 2010; Ansell 2008b; Rauh, Kirchner, and Kappe 2011).[5]

[4]Note that, to the best of my knowledge, no study exists that establishes the relationship between partisan ideology and education outputs or outcomes in Latin America for any period prior to 1990. Nor does the data exist to do such a study now.

[5]Ansell (2010) makes the claim that these findings hold only if Green and Communist parties are excluded

In addition to findings that the left spends more on education in advanced economies, there is also a substantial literature that finds that democracies tend to spend more on education than non-democracies (Brown and Hunter 2004; Brown and Hunter 1999; Stasavage 2005; Rudra 2005; Kaufman and Segura-Ubiergo 2001; Wibbels 2006). This finding has been replicated in a variety of contexts, including Latin America generally (Huber, Mustillo, and Stephens 2008), in African countries (Stasavage 2005), and subnationally in Mexico (Hecock 2006). Combining these findings with the arguments of power resource theory from Huber and Stephens (2012)[6] that allowing the left to compete in elections results in greater social spending reinforces the expectation that the left should outperform the right.

These expectations on spending must be tempered slightly by the reality that the left can be limited in its ability to increase the government budget or the amount of it dedicated to education for two reasons. First, fiscal realities constrain government spending. Latin American governments have long struggled to raise funds through taxation and thus often rely on revenue from less flexible sources (Ames 1987; Besley and Persson 2014). Second, while education presents a pathway toward the left's goals, it is not the only possible pathway. More immediate solutions for reducing inequality may appear tempting to politicians concerned with reelection. The long-term nature of equity enhancement through education (The World Bank 2019) also makes it less appealing to politicians concerned with the immediate economic situation.

Looking at relative spending levels, if the left is committed to reducing inequality, then it is reasonable to expect them to devote greater resources to the levels most associated with equity enhancement. Specifically, the left should favor spending at the secondary level. Numerous studies show that secondary education provides a pathway to enhancing equity, particularly now that most countries have achieved universal primary education and

from the analysis. In the Latin American context, Green and Communist parties are frequently absent from electoral competition, if they exist at all (Coppedge 1997), supporting the expectation that these findings should replicate in Latin America.

[6]This research builds on previous work in Rueschemeyer, Huber, and Stephens (1992) and Huber and Stephens (2001)

as skill requirements for even entry-level jobs increase around the world (Birdsall, Lustig, and McLeod 2011; Lustig 2015; Lustig, Lopez-Calva, and Ortiz-Juarez 2013; Psacharopoulos 1977; Psacharopoulos and Patrinos 2004; Hanushek and Wößmann 2007).

Investment in primary education may have a progressive result as well in this context (ECLAC 2013; Lindert, Skoufias, and Shapiro 2006). In Latin America, most upper class families (and increasingly middle-class families) remove their children from the public school system and put them into private education institutions (Puryear 1997; Narodowski 2008). Promoting strong primary education thus advances equitable distribution of education by incorporating the poorest sectors of society, even after universal primary education has been achieved.

Electoral Motivations

The left's vocal commitment to education and equity enhancement (through both education and other policies) has led to the left's "ownership" of education.[7] The left has earned this reputation, at least partially, through its campaign rhetoric. According to Comparative Manifestos Project data (Lehmann et al. 2015), the correlation between left–right ideology (on a -100 to $+100$ point scale) and the percentage of a party's manifesto devoted to education topics is -0.44, indicating a medium correlation between left parties and the amount of a manifesto devoted to education. The left's need to take action while in office in order to maintain this reputation is one reason to expect it will outperform right on primary and secondary education. This issue ownership is particularly important for two groups in the left's traditional electoral coalition: teachers' unions and students. The left may opt to spend more on education as a signaling mechanism for these groups that they are serious about education (Potrafke 2011). Spending can thus serve two purposes: a direct commitment to education in which a party "puts its money where its mouth is" and an indirect signal to

[7]Issue "ownership" is the view by voters that one party is better able to "deal with" or "fix" problems in that policy area (Petrocik 1996). See Petrocik (ibid.) or Petrocik, Benoit, and Hansen (2003) for a broader theory of issue ownership and its effects in the context of US presidential elections.

supporters that the party is "serious" about education. It is the combination of signal and follow-through that establishes issue "ownership" (Stubager and Slothuus 2013; Walgrave, Lefevere, and Nuytemans 2009; Petrocik, Benoit, and Hansen 2003).

The left has strong historical ties with the teachers' unions in most countries in the region. Consequently, we should expect that these ties would result in greater shares of resources being spent on teachers, even if overall education expenditures remain constant. This connection also supports the expectation of greater spending by the left on primary and secondary education, where the unions are active.

The strength of teachers' unions varies by country in Latin America, but overall the unions represent the single strongest stakeholder in education in the region. In addition to the disruptive capacity created by the unions' size and ability to overcome collective action problems (Grindle 2004),[8] these organizations exercise high degrees of control over their members and can thus vote as a largely unified bloc (Murillo et al. 2002; Cook 1996). Further, the unions can act as a political machine, putting their existing organizational power and deep and direct connections to local communities through schools to use for parties (Larreguy, Montiel Olea, and Querubin 2017).

The second important group in the left's electoral coalition is students. During the second half of the twentieth century, the intellectual left (Castañeda 1993; Puryear 1994) became increasingly involved in politics. Despite being outnumbered by centrist and conservative students uninterested in political participation (Hennessy 1979; Liebman, Walker, and Glazer 1972), radical leftist students played an important role as ambassadors for the overall connection between leftists and intellectuals (Castañeda 1993), a bellweather for public opinion under suspect electoral outcomes (Hennessy 1979), and as grounds for establishing grassroots

[8] All labor unions operate from a fairly limited playbook of actions in the event that negotiations between labor and management fail (Murillo 2001). Chief among these options is the strike. Teachers' strikes tend to be highly disruptive because parents must find alternative childcare for the students who are no longer in class. Equally, there is essentially no option for education authorities to bring in replacement teachers in the event of a strike. The disruptive nature of strikes, combined with a the perception that these actions harm students, contributes to the negative feelings toward teachers' unions.

organization in support of the party, as the Communist Party in Venezuela did in the 1970s (Goldfrank 2011, p. 43). Part of the left's electoral strategy involved promising free tuition to these students (Levy 1986; Castañeda 1993). While this promise went largely unfulfilled through the 20th century, it helps to explain the inconsistency between a commitment to equity enhancement and promises to fund a level of education that tends to be regressive (Psacharopoulos and Patrinos 2004; Ansell 2008b; Rauh, Kirchner, and Kappe 2011; Scott 2002). Subsidies to the university system do not enhance equity given the middle and upper class backgrounds of most public university students.[9]

1.1.2 The Right and Education

As Luna and Rovira Kaltwasser (2014) argue, the right in Latin America is unified by its beliefs on inequality, but differentiated on a number of other dimensions including electoral strategies. Some right parties engage in programmatic, partisan strategies. Examples include the National Action Party (PAN) in Mexico, Independent Democratic Union (UDI) in Chile or Nationalist Republican Alliance (ARENA) in El Salvador. Other right parties engage in electoral strategies outside a traditional left-right divide. Examples include movements led by Alberto Fujimori in Peru and Álvaro Uribe in Colombia.

The right maintains its own concerns for education even though the left may be expected to dominate in the primary and secondary levels. Ideological concern over the *economy* and electoral realities generate competing expectations about performance in education. This leads to contrasting expectations that the right should perform at least as well as the left on education.

Ideological Motivations

The right is defined by the belief that inequality is a natural phenomenon that either is not a problem or that the state should only intervene to ensure equality of *opportunity* (Freeden

[9]During a massive wave of expansion in Latin American universities in the 1960s and 1970s, enrollment increased over four-fold, but "in spite of reformists' efforts to widen the social composition of universities, they continue to draw their students overwhelmingly from the middle classes" (Hennessy 1979, p. 150).

et al. 1996; Wiesehomeier and Doyle 2014). Yet education is not only connected with equity enhancement, it is also important for macroeconomic *growth* (OECD/ECLAC/CAF 2016; Hanushek and Wößmann 2007), an important goal of the right, and for upward mobility at the individual level (Psacharopoulos and Patrinos 2004).[10] Supporting education can be an avenue for supporting growth, especially in places where employers often complain that they cannot find sufficiently skilled labor (Kosack 2012).

Further, there remains disagreement about some aspects of the connection between partisan ideology and education outputs even in the context of the developed OECD countries. Several authors find support for the thesis that right parties favor spending on tertiary education when that system has restricted enrollment (Psacharopoulos and Patrinos 2004; Ansell 2008b; Ansell and Samuels 2010; Rauh, Kirchner, and Kappe 2011).[11] In Latin America, Huber and Stephens (2012) and Huber, Mustillo, and Stephens (2008) find that partisan ideology is not a strong predictor of education spending while Kaufman and Segura-Ubiergo (2001) suggest that the left spends *less* than the right.[12] Still others argue that there is little reason to expect the left to spend more on education — education spending *can* be regressive — and argue that partisanship plays no role in determining human capital investment (Jensen 2011).[13]

Garritzmann and Seng (2016) also argue that partisan ideology suffers as a predictor for theoretical reasons: party families are not sufficiently homogeneous in regards to education preferences. Categorizing parties into families (Christian Democrats, "liberal," or "conser-

[10]The education budget has long been a source of clientelist funds (Ames 2001; Luna and Kaltwasser 2014), also contributing to the interest of the non-electoral right (Luna and Rovira Kaltwasser 2014).

[11]However, as access and enrollment in tertiary education expand, the right will begin to oppose spending at this level and the left will move from favoring a public-private partnership in tertiary education toward a more publicly funded model (Ansell 2008b).

[12]Note that Kaufman and Segura-Ubiergo (2001) measure "popular" governments as opposed to a direct left/right measurement. I argue the latter is essential for answer the question posed in this study. Equally, Huber and Stephens (2012) and Huber, Mustillo, and Stephens (2008) combine health and education spending into a single dependent variable. Given the variation in education spending, especially in relation to other social services, education should be treated independently.

[13]Under certain tax regimes, if the wealthy utilize the public education system at a sufficiently higher rate than the non-wealthy, the redistributive effects of education will flow upwards.

vative" parties, for example) may provide greater differentiation than a simple left-right dichotomy, but there may yet be a high degree of variation in policy positions within each family — a Green party in one country may hold a different position on education than its counterpart in a neighboring country. Pioneering studies on this question in the OECD found that partisan variables were good predictors of education spending (e.g. Castles 1982), with the left spending more than the right. These studies were criticized as suffering from specification issues or focusing on a period characterized by unique economic conditions and whose results are thus colored by temporal trends. Reanalyses of these models confirm temporal trends but fail to find a long-term relationship (Busemeyer 2007; Potrafke 2011).

Concerns about the usefulness of party family as an explanatory variable are well taken within the OECD and in comparing parties across the world. However, in the Latin American context we observe parties of the same family staking out similar positions on education (Gibson 1997; Murillo 2001). Still, the mixed empirical findings temper the expectation that the left should outperform the right and suggest, instead, a possibility that the right and left may actually perform on similar levels.

Electoral Motivations

The right's electoral strategy involves groups connected with tertiary education. However, their interest is primarily class based. A large proportion of public university students comes from middle- and upper-class families (Liebman, Walker, and Glazer 1972; Arocena and Sutz 2005), including those with business backgrounds — one of the blocs historically associated with the right. Support for tertiary education derives both from fear of disruptive protests by the highly organized students and political reprisal by their parents and in support of these groups, since many students come from fairly affluent or politically connected families. The right has no mechanism by which to deliver selective benefits only to students on the right. Scholarships are uncommon in the region and university admission is sufficiently meritocratic that free tuition to only a subset of universities would not accomplish this goal

either. Further, Latin America (along with the rest of the world) has seen an explosion in universities in recent years. Figure 1.1 demonstrates the exponential increase in total universities in the region. A large percentage of the new universities in the past decade are private, often for-profit universities. These new universities are owned by economic elites who support the right.

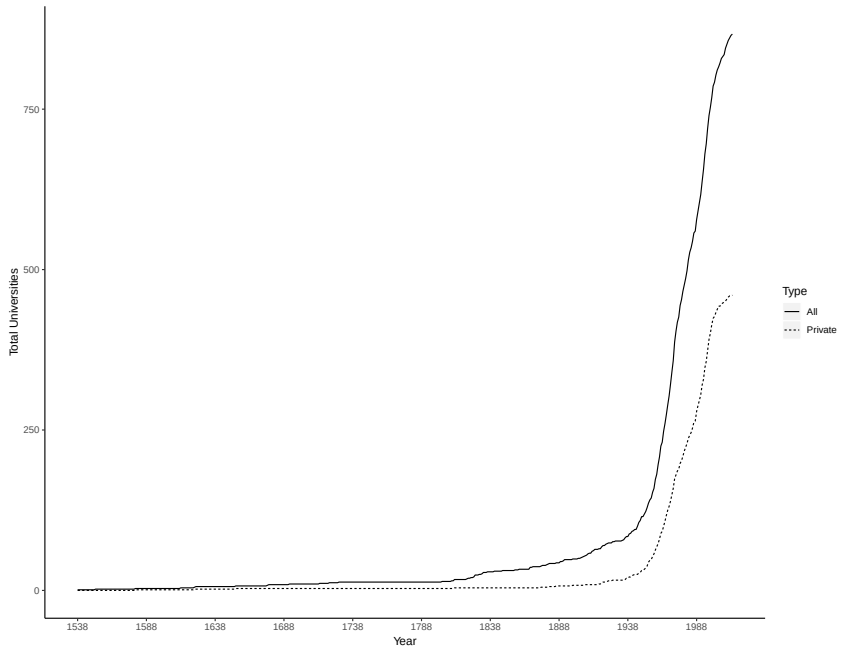

Figure 1.1: Growth of universities in Latin America. Note that the number of private universities is underestimated here, as unreported types are assumed to be public. Figures also do not take into account enrollment. Many for-profit universities operate many campuses and enroll a higher number of students than their public counterparts. Calculations are based on data from Apfeld (2019).

These same business elites have also expressed concern that a lack of skilled labor has prevented more robust economic growth (Downie 2007). The deficit of skilled labor exists at a level such that many businesses have created their own training programs to provide the education their employees lack (Sanchez Zinny and McBride 2014). But businesses need workers with skills they cannot provide (entirely) on the job: engineering knowledge, technological expertise, foreign language abilities, writing skills, and a host of other skills and abilities needed to perform white-collar sales and other professional work. Economic elites

in Latin America also express a feeling of entitlement to free, high quality tertiary education based on the argument that they bear an outsized share of the tax burden (Sanchez-Sibony 2019) but do not use the primary or secondary education systems (Puryear 1997). Thus supporting education across all levels has potential electoral benefits for the right as well.

Although the teachers' unions are not generally part of the right's electoral strategy, their ability to organize and disrupt means that the right cannot afford to ignore them (Grindle 2004; Cook 1996). The right, generally, does not seek out support from the teachers' unions to build an electoral coalition. Once in power, however, the right is constrained by the knowledge that any educational reforms or budgetary changes that the unions view as threatening will be met with fierce opposition and potentially disruptive strikes (Moe 2017b).

The right stands to benefit electorally from supporting education in favor of its base and in avoiding conflicts with the opposition. However, the forces are not likely to be as strong as those that drive the left toward support for education. Business elites often have diverse (and potentially opposing) interests and do not organize frequently in relation to education policy (ibid.). And while unions can prove to be a disruptive force, right parties have shown (as in the case of Chile (Siavelis 2014)) that they can reduce the teachers' unions support of the left without fully embracing their agenda.

1.1.3 Expectations for Left and Right in Education

The expectations laid out in this section must be tempered by the reality that many decisions in education, particularly with respect to spending by level, are dictated by the state of development of the education system. In other words, if a country has yet to achieve universal access at the primary level, then increasing spending at the secondary or tertiary levels makes little sense and governments essentially *must* spend higher percentages of their education budgets on primary education. This concern is addressed in the statistical tests that follow by controlling for several measures of the state of educational development in a country. Still, these expectations should be viewed *ceteris paribus* with respect to education

system development.

To summarize, there are competing expectations for left and right based on foundational differences in beliefs about inequality, different electoral considerations, and previous empirical work. In terms of inequality, the left believes that the state should intervene to enhance all equality, including equality of *outcomes* while the right is focused on *growth* and favors state intervention to ensure, at most, equality of *opportunities*. In terms of electoral strategies, the left has long been aligned with the teachers' unions, which have an interest in increasing spending on primary and secondary education. The right, in contrast, is supported by business elites who have called for an increase to skilled labor in the region. In terms of empirical findings, a number of authors have found that partisan ideology is a predictor of education spending in the OECD, while others dispute these results.

Outputs

The left's concern for enhancing equity and its connection with the teachers' union produce expectations that it will outspend the right both overall and at the primary and secondary levels. Although the left has long promised free university education, it should still be expected to spend less on this level than the right because tertiary tends to be more regressive until very late in the education development process. Further, the right is drawn to support tertiary education because of calls from business elites for more skilled labor. In terms of areas, the left should be expected to devote a greater share of its education budget to staff expenditures in support of the unions.

- The left will spend more overall than the right because of its commitment to equity enhancement and previous empirical findings from the OECD.
- The left will invest more of the education budget in primary education than the right, after controlling for education system development, because of the progressive aspects of this level (particularly in the Latin American context where many middle- and upper-class families remove their children from the public system) and the left's connection

to the teachers' unions.

- The left will invest more of the education budget in secondary education than the right, after controlling for education system development, because of its connection to the teachers' unions and the progressive nature of secondary education.
- The left will invest less of the education budget in tertiary education than the right because tertiary education tends to be regressive compared with lower levels of education, controlling for education system development.
- The left will invest more of the education budget in staff expenditures than the right because of its connection to the teachers' unions.

Outcomes

The left's belief in the state's role for enhancing equality of *outcomes* leads to the expectation that measures of quality will be higher under the left than the right. Quality outcomes should also be distributed more equitably under the left than the right. In contrast, the right's belief in equality of *opportunity* leads to the expectation that measures of access will be higher under the right than the left. Similarly, access outcomes should also be distributed more equitably under the right than the left. This expectation is driven more by an increased concern by the right than a decreased concern by the left.

Expectations for outcomes are independent of those for outputs. That is, we know that spending alone is not sufficient for producing quality education. Government can produce different outcomes in education through more pathways than changes in the budget. Specifically, differences in prioritization of education can result in differences in outcomes. The executive can devote greater human capital to bureaucracies (choosing higher quality leadership, for example) or direct the education bureaucracy to shift focus from one goal to another. These changes can all occur within the context of a fixed budget but may still produce different outcomes.

The state of development of the education system affects expectations for outcomes, but

to a lesser degree than for outputs. Focusing on access or quality of higher levels of education before lower levels again makes little sense. It is possible, however, to focus simultaneously on primary quality and secondary access, for example. Equally, it is possible to improve quality of any level before achieving universal access outcomes, although this is an atypical approach to education system development. In this sense, outcomes are more independent of one another than outputs.

- The right will outperform the left in terms of education *access* because of its focus on equality of opportunity. Access will also be more equitably distributed under the right than the left for similar reasons.
- The left will outperform the right in terms of education *quality* because of its focus on equality of outcome. Quality will also be more equitably distributed under the left than the right for similar reasons.

1.2 Explaining Unexpected Convergence

In contrast to both previous work that finds partisan ideology as a predictor of education outputs and expectations that the left should be dominant in primary and secondary education, I find that there are few differences between left and right on metrics of outputs and outcomes. In terms of outputs, both absolute spending and relative spending across levels (primary, secondary, and tertiary) and areas (staff, capital, and current expenditures) show very little variation under left and right administrations. In terms of outcomes, partisan ideology is not a good predictor of enrollment, completion, transition, dropout or repetition rates, or test scores. Nor does it explain much variation in gender equity in any of these outcomes.

Chapters 2 and 3 provide a statistical analysis of these metrics across Latin American democracies and Chapter 4 provides an alternative explanation for why this convergence exists. Here I sketch an outline of this explanation with the addition of some non-political factors that contribute to the wider politics of education in the region. In order to explain

convergence between left and right, I argue that policy legacies, stakeholder pressures, and expert advice are, in order of importance, three political forces that dominate divergent partisan preferences. Additionally, a combination of short-term costs with only long-term benefits and unique aspects of education as a policy area are non-political factors that further contribute to convergence. My argument resembles that of Heclo (1978), who finds that bureaucratic and technocratic forces contribute to policy to a greater degree than partisan politics in the American context.

1.2.1 Political factors driving convergence

Policy legacies

Policy legacies place constraints on governments seeking policy reforms and establish the guardrails of "normal" policy.[14] These constraints are the result of bureaucratic inertia and political costs associated with change. Bureaucratic inertia stems from a logic of "positive feedback" loops (Arthur 1994) and path dependence (Pierson 2000). Policies in this context become locked in and increasingly difficult to overturn with the passage of time. Outside of critical junctures in which policy can change dramatically, routinization of tasks, institutionalization, and expectations all develop in a complementary and self-reinforcing manner (Collier 1979).

Many education policies are more susceptible to these forces than other policy areas because implementation ultimately occurs at diffuse levels by teachers who are not, by training, bureaucrats and are often resistant to change. The degree of diffusion increases challenges and time required to make any changes while teachers may perceive only limited benefit to implementing new policy (Bell 1995; Hess 1999; Payne 2008).

The degree to which inertia may affect a bureaucracy depends partially on the character of the bureaucrats themselves. Technocrats, those bureaucrats who are technically trained to seek out ideal solutions to problems (Centeno 1993), offer consistent recommendations

[14] I use the term "reform" throughout this project to denote any changes to policy, without any assumption about whether changes are substantively meaningful or if they represent an improvement of any kind.

regardless of political consequences. A techno*pol*, a subtype of technocrat that also weighs political ramifications of policy (Bersch 2016), also has the methodological background but may temper some recommendations for political expedience. In both cases, however, reliance on these actors increases the likelihood that policy will endure across administrations.

The political costs of policy legacies include the loss of an important source of power (patronage jobs and funds for non-programmatic distribution) and a fatal combination of short-term costs with only long-term benefits. Patronage and clientelist systems have long plagued Latin American democracies (Ames 1987; Stokes et al. 2013). Education in particular has been a source of patronage jobs in the civil service (Grindle 1977; Gordin 2002). Equally, education budgets have been used for non-programmatic distribution in the form of discrete credit-claiming projects like the construction of new schools over more pressing programmatic changes (Ames 2001; Luna and Mardones 2016). These forces encourage stasis and status quo in education policy.

Policy legacies also impose practical constraints on policymakers. Education budgets are created in the larger budgeting process and therefore must compete for funding with all other policy areas (Wildavsky 1986). Finding sufficient capital for education projects can limit the scope of possible policy. Limited state capacity creates a similar constraint on policymakers (Besley and Persson 2014). Finally, policymakers must confront natural human limitations in cognitive capacity, restricting the scope of policies they may consider and pushing them toward an inherent preference for the status quo (Jones and Baumgartner 2005).

Stakeholder pressures

Education is a policy area with a very wide range of stakeholders. As a result of the diffusion of mandatory schooling laws and a concerted effort to extend universal primary education during the 20th century (Meyer, Ramirez, and Soysal 1992), nearly every individual spends at least some time within the walls of a school and education systems encompass a wide range of actors. At any given moment, large percentages of a country's population are either

enrolled in school or have children who are enrolled. Additionally, teachers, principals, and other school staff represent significant percentages of the labor force. Schools are also consumers of textbooks, office supplies, and other resources, making them an important economic player.[15] Some of these groups are more organized than others, but all represent interests that politicians on left and right cannot ignore entirely without invoking electoral costs.

Not every actor has an equal stake or equal political power, however. In the Latin American context, teachers' unions are the single most important actor and most powerful stakeholder (Cook 1990). There is variation between countries as to the power that the union has (or unions have), but in all cases, the teachers represent an interest that cannot be ignored.

At the university level, the rectors are another crucial stakeholder in education debates (Bernasconi 2015).[16] This well-connected group represents the interests of university professors. Variations in how these individuals are chosen and whether membership is restricted to only the oldest universities creates variation in the amount of power this group holds. The rectors seek to protect an institution — universities — that has both revolutionary and conservative impulses.[17] These divergent drives, as well as the politically divided student body (with radical students in a vocal minority and centrist and conservative students in a silent majority (Hennessy 1979)) mean that rectors are not consistently aligned with either left or right. This role also means that they are frequently replaced by military regimes immediately following coups, since their loyalty to the state is not assured (Einaudi 1963;

[15]Given the scope of education, it can be difficult to identify a complete list of stakeholders in education. One incomplete list may include "teachers, students, parents, industrialists, [and] politicians" (Wolff and Castro 2000, p. 17). Elsewhere, these authors add to this list private educational institutions, labor unions, and the private productive sectors (ibid., p. 32).

[16]In Latin American universities, the rector "combines the attributes of president and dean at most United States universities" and is usually selected by faculty at the university, but in some cases is appointed by the government (Einaudi 1963, p. 640).

[17]Peñalver (1979, p. 195) describes this divided chacter as "revolutionary, as a source of idealism denouncing social hypocrisies and injustice and calling for enlightenment and reform in society; conservative as its concerns focus on self-administration and providing education to its members."

Peñalver 1979). Although they do not owe allegiance purely to any one party, university rectors do wield political power in their defense of their institutions and politicians must consider their input when crafting policy that affects higher education.

Students are stakeholders in the education system and outnumber rectors and teachers by a large margin but as a political actor, students are much weaker. University students are in a better position to organize as a political force than younger students because of increased autonomy, mobility, and access to university facilities where they can gather. Only in rare cases (e.g. the 2006 "Revolución Pingüina" in Chile) do we ever see students in high school (or even elementary school) attempting to organize and influence social policy (Disi 2018).

Finally, parents are an additional stakeholder in the education system. Like the students, though, large scale parent organizations are the exception and not the rule. Expectations regarding direct parental involvement at the school level is often dictated by school principals and varies to a large degree between institutions (UNESCO 2009). Yet in both cases, organization and pushes for change occur mostly at school and district levels, not at the national level.

Expert advice

Technocratic expert advice was once associated primarily with the neoliberal right in Latin America. In the past few decades, however, the left has increasingly relied on these experts in shaping their policies (Dargent 2015). Because the advice offered by experts in the field does not vary to fit the political goals of the current government, the convergence on reliance on experts also contributes to a convergence in policy. Additionally, equity has become a central theme of the advice given by experts — the motivating concern of the left (Levitsky and Roberts 2011a). This pushes right governments toward convergence on the issue that defines the left.

These experts are both domestic and international, with a high degree of overlap between the two networks. Some experts operate within education bureaucracies, while others

exist outside the government with ties to universities and or think tanks and lobbying organizations. Experts at the World Bank or Inter-American Development Bank are typical examples for this group. These organizations have deep ties to policy elites and interact with policymakers on a regular basis. They provide an abundance of advice and frequently, in the case of large international organizations, modest funding to implement new programs.

The advice from experts draws a distinction (followed here) between access, quality, and equity (Corrales 1999). Recommendations on access have shifted from a focus on the primary level to the secondary (Bassi et al. 2012), largely because universal primary education has been achieved in nearly all countries. In focusing on secondary level access, experts continue to find conditional cash transfer programs important, if insufficient to achieving universal secondary enrollment (Busso et al. 2017). Advice on access is generally unified, with little dissent in the dominant recommendations. In terms of quality, experts are less certain about the best practices (ibid.). This has not prevented them, however, from offering a wide range of solutions, many focused on attempting to improve teacher quality.

A consensus on a focus on equity in education is a more recent development. Experts now view it as an essential component of any successful education program. According to a report from the OECD, "The evidence is conclusive: equity in education pays off. The highest performing education systems across OECD countries are those that combine high quality and equity" (OECD 2012, p. 14). The expert focus on equity pushes the right, which relies heavily on technocrats to design policy, toward policy more in line with the left's goals.

1.2.2 Non-political factors driving convergence

In addition to the three political factors (policy legacies, stakeholder pressures, and expert advice) described above, there are several non-political aspects of education that contribute to convergence between left and right on both outputs and outcomes. Specifically, education policy is an area in which short-term costs are coupled exclusively with long-term benefits

and education is unique compared with other principal-agent relationships:[18] there are no educational "emergencies," education is a human right, and its provision is necessarily sequential and cumulative. Convergence is more likely as a result of these factors because they place equal constraints on both left and right.

Short term costs with only long term benefits The economic costs (training or hiring teachers, building new schools, or investing in technology) and political costs (backlash from various groups for reforms that they perceive to be against their interests) of education policies are nearly all short-term while the returns to education are only long-term (Nelson 1999). According to Kaufman and Nelson (2004, pp. 4–5),

> As the title of this volume ["Crucial Needs, Weak Incentives"] suggests, there is a crucial need for social reforms, but the incentives to put them into effect are surprisingly weak. Because measures to improve equity, quality, and efficiency of education and health services are urgent, we might expect them to appeal to diverse constituencies. Yet despite this potential appeal, organized pressures for reform are limited, and decision makers have generally not faced strong political pressures to take action. Indeed,…major social sector reforms in health and education tend to be secondary to more pressing concerns on the political agenda, and they have often been set aside when they appear to come into conflict with these concerns.

Changes to the education system, particularly those that address equity, may come with concentrated short-term economic and, potentially, political costs (Corrales 1999). Choosing these policies extracts an opportunity cost as politicians forego other spending options that may produce more immediate tangible results for voters. Additionally, dramatic changes to the education system may be opposed by large voting blocs (teachers or parents) and thus

[18] Economists define a principal-agent relationship as one in which "two individuals…operate in an uncertain environment and for whom risk sharing is desirable. Suppose that one of the individuals (known as the agent) is to take an action which the other individual (known as the principal) cannot observe" (Grossman and Hart 1983, p. 7). Education can be modeled as a principal-agent relationship where the principal is the student (or more accurately in most cases, parents of students) who contract out the responsibility of formal education to the agent, the state.

create short-term electoral costs (Cook 1996; Murillo 1999). At the same time, any poverty-reducing or equity-enhancing gains from education are long-term benefits, often beyond the time horizon of most politicians focused on the next round of elections (The World Bank 2019). These benefits are also diffuse, decreasing the potential demand for them (Corrales 1999).

No educational "emergencies" There is no such thing as an "education emergency," even if all agree that education is important. As de Moura Castro and Musgrove (1998) entertainingly illustrate, there exists no scenario in which some ignorance is met with calls to an emergency service and the attention of a team of highly trained education experts focused on removing that ignorance. The obvious analogy is to health, where emergencies are met with this kind of response, but the same can be said of other services. If the power or water is cut, emergency calls are placed and a trained team is sent in to remedy the problem immediately; if a fire breaks out, then the fire department responds immediately.

This is not to say that there cannot be an education crisis or emergency. Indeed, many individuals certainly suffer from education deficits and entire education systems are frequently accused of being in crisis (see, e.g., National Commission on Excellence in Education 1983; Farber 1991; Berliner and Glass 2014; Hursh 2008, on the "crisis" in American education). Yet neither case is met with an "emergency" response nor is such a response possible. Identifying the cause of problems can be challenging and solutions take a long time to implement. Further, solutions are often subject to uncertainty and debate. Unlike in medicine (where there is an agreed upon response to an emergency wound) or electricity provision (where a clear fix to downed power lines exists), poor education outcomes are made controversial by questions of individual efficacy and the impact of factors like family background, socioeconomic status, and race.

Education is a human right Education is a basic human right (UN General Assembly 1948). Unlike many other government services, there is universal acceptance of education as both a positive public good and a service that the government should provide (DiNitto and Johnson 2012). Other government provided services are often subject to debate about whether they should be provided by the government or even if they represent a positive good.[19] These expectations carry with them political consequences: politicians must provide basic levels of this service and its reduction is likely to carry significant electoral consequences. In other words, politicians can never provide "less" education because citizen demands are always in the direction of more and better. Governments also face additional pressures from international organizations to provide this service in increasing quantities and in higher quality to all citizens.

Education is sequential and cumulative Education is sequential in the sense that users must advance through its stages in a fixed order and cumulative in that its rewards build based on how much education one has received (Kosack 2012). Contrast this with healthcare where neither disease nor treatment builds on itself in the same sense. A sickness may worsen and demand new types of treatment, but sickness does not necessarily begin with a hang nail and progress to pneumonia, nor does a cancer patient have to try antibiotics before moving on to chemotherapy. In education, learning the numbers is a *necessary* precursor to learning multiplication and a learner *must* learn to decode words in sentences before reading a college level text.

These aspects of education place limits on the types of policies that can be pursued in any given circumstance. Attempts to improve the instruction of calculus, for example, will matter little if most students have received insufficient instruction in algebra. Equally, attempts to improve secondary enrollment in a given area will matter little if students have already

[19]While these debates are strongest in the United States where the classical liberal tradition frames most political debates, discourse in other countries can and does cover similar ground.

dropped out during their primary education. Put otherwise, the level of development of an education system establishes crucial demands and limits on policies, particularly spending by level. Increasing spending at the secondary or tertiary level makes no sense (and may not be possible) if universal primary education has not been achieved, for example.

1.3 Alternative Explanations for Education Performance

There exist several alternative explanations for education performance in Latin America. Two are political explanations: that it is not domestic politics but international pressures that have produced meaningful changes and two that ideology matters less than the length of time a party stays in power. Two are economic explanations: one that macroeconomic factors drive education metrics and the commodities boom is responsible for performance gains and two that education is an inefficient vehicle for redistribution. Each of these arguments offers some insight into the determinants of education outputs and outcomes. However, none is sufficient on its own.

1.3.1 Political Arguments

One political explanation for education performance is that any expansion in access and quality of education over the past half-century is the result of increased international attention and pressure on education in all parts of the world (Nelson 1999; Corrales 2004). Education has been heralded as the great equalizer with the potential to reduce both poverty and inequality. International efforts increased the pressure on developing states to invest in education during the 1980s and 1990s (Nelson 1999). Likewise, the MDGs, adopted in 2000 and their replacement SDGs in 2015 have added urgency to efforts to make these changes to education. There is no doubt that international pressures have played a role in this expansion. Above I outlined some of the ways in which technocratic experts exert pressure on governments. However, international pressure alone cannot explain either the variation in the degree of expansion among countries or the unevenness in results, even after controlling for the starting levels of access and quality.

A second explanation comes from Huber and Stephens (2012), who argue that the length of time a party spends in power, particularly the length of time the left spends in power, will affect policy outcomes. Length of left control alone cannot be a sufficient explanation, however. Education showed positive trends starting in the 1990s, before the left wave swept through Latin America (The World Bank 1995; Puryear 1997). Nevertheless, the argument that length of time in power allows for a greater possibility of implementation deserves attention. To account for this factor, I control for length of time in power in the empirical analysis presented in Chapters 2 and 3. By itself, however, this variable is insufficient to explain education performance in Latin America.

1.3.2 Economic Arguments

Some explanations for education performance ignore political factors entirely. The first is the correlation between partisan control and economic conditions across Latin America. The left in Latin America has received a lot of attention in the literature over the past decade (e.g. Weyland, Madrid, and Hunter 2010; Cameron 2009; Levitsky and Roberts 2011b). This attention is justified — a wave of left governments being elected across the region starting with the election of Hugo Chavez in Venezuela in 1998 represent a major shift in the political balance. The left wave was an opportunity for Latin American countries to try policies the left had long desired but never been able to implement. Over this same period of time the overall trend in education outcomes (as shown in Chapter 3) was positive. The argument would be that any divergence is simply a matter of divergent economic conditions under left and right. However, the correlation between leftist control, the commodity boom, and improved education metrics is not sufficient to prove a causal relationship between increased revenues and outcomes. While this is a plausible story to explain why the left might spend more in absolute terms than the right, it does nothing to explain differences in the relative levels of spending within the government budget. Nor does it explain differences in education outcomes between countries.

A second economic argument comes from Jensen (2011), who argues that partisan ideology does not drive differences in education outputs because high income group usage of education makes it a less redistributive social program. He proposes as an alternative that deindustrialization and economic structure are better predictors of differences in education outputs because centrally coordinated economies tend to produce more specialized workers in need of retraining as the result of shifts in the economy. This explanation, which relates only to education outputs and not outcomes, has several problems. First, Garritzmann and Seng (2016) have shown that these findings do not hold when the unit of analysis is changed from country-year to the more appropriate government term. Second, deindustrialization in Latin America does not explain either the cross-national or subnational variation in education spending. Third, his claim that party ideology does not matter rests on the argument that education is a poor policy vehicle for advancing redistribution. Yet Ansell (2010) and others (e.g. Lustig 2015; Holland and Schneider 2017; Bucheli et al. 2013; Levy and Schady 2013) demonstrate that while education is not *necessarily* redistributive, there are broad conditions under which it can be.

1.4 Additional Considerations

1.4.1 Scope of this Project

This project focuses on Latin American *democracies*. Policy legacies matter in authoritarian settings, but non-democratic leaders have greater leeway to ignore these aspects and impose unilateral changes. Importantly, stakeholder pressures matter much less in non-democratic settings.[20] It is also only under the free competition of political parties does partisan ideology make sense as a potential explanatory variable for policy outcomes (Gibson 1997). Additionally, the finding of convergence between left and right on education outputs and outcomes is only interesting in this competitive environment. Education under authoritarian regimes is an important question (see Croke et al. (e.g. 2016), Paglayan (2017), and

[20]Knutsen, Nygård, and Wig (See 2017) for a discussion of the role that elections play in authoritarian settings.

Dahlum and Knutsen (2017) on questions related to education and non-democratic regimes), but it is outside the scope of this project.

Further, this project focuses mostly on primary and secondary education. Tertiary education enters the discussion at times because these levels do not operate in isolation — education budgets are divided across all levels and access and quality at lower levels affect higher levels. The project ignores pre-primary education as well as post-secondary non-tertiary education (e.g. technical training programs). These areas are important in the development of a complete education system but they represent only a small fraction of the education budget in all cases. Further, pre-primary education remains limited across Latin America and data on it even more so, making any quantitative analysis impossible.[21]

1.4.2 Why Latin America?

With few exceptions, the existing literature focuses on OECD countries. I argue that the developing world, particularly Latin America, deserves greater attention and its own set of studies for at least four reasons. First, Latin America is a region that has long been defined by extraordinarily high levels of inequality (Huber et al. 2006). Encouragingly these numbers have fallen since the year 2000, but Latin America still holds the ignominious title for being the region with the highest levels of inequality (Cornia 2014) and the downward trend shows signs of slowing or even reversing itself in many countries (Gasparini, Cruces, and Tornarolli 2016). These high levels of inequality present a starting point and future challenges distinct from the more equitable societies of the OECD. Given the role that education can play in reducing inequality, it is all the more essential to answer the question of which political factors determine education outputs and outcomes.[22]

[21] As more data becomes available, this will be an important area to explore because of the connection between early childhood education and equity enhancement in adulthood (Heckman 2011).

[22] There is little doubt that increased schooling (and the increase in cognitive skills it provides) can result in higher wages and upward mobility at the micro level (Hanushek and Wößmann 2007; Psacharopoulos and Patrinos 2004). Recent research has also found that the "skills premium" — the amount that skilled labor earns above its unskilled counterpart — has decreased in recent years (Lustig, Lopez-Calva, and Ortiz-Juarez 2013; Psacharopoulos and Patrinos 2004). It should be noted that this does not imply that education does not contribute to reducing inequality, only that as average levels of education rise, its effect is reduced

Second, studies that focus on Europe and the OECD also tend to focus on tertiary education spending. Researchers logically focus there because there is so little variation in the investment at the primary and secondary levels (Busemeyer 2007; Castles 1982). This is not true of Latin America, where the spending on primary and secondary education still varies to a high degree. Panel a in Figure 1.2 shows that relative to the size of their economies, Latin American governments spend, on average, a greater share of their budgets than do OECD governments and have greater variance in that proportion. Similarly, panels b, c, and d in Figure 1.2 show that relative to the size of their education budgets, Latin American countries have a wider range of variation in the levels at which those resources are divided.

somewhat.

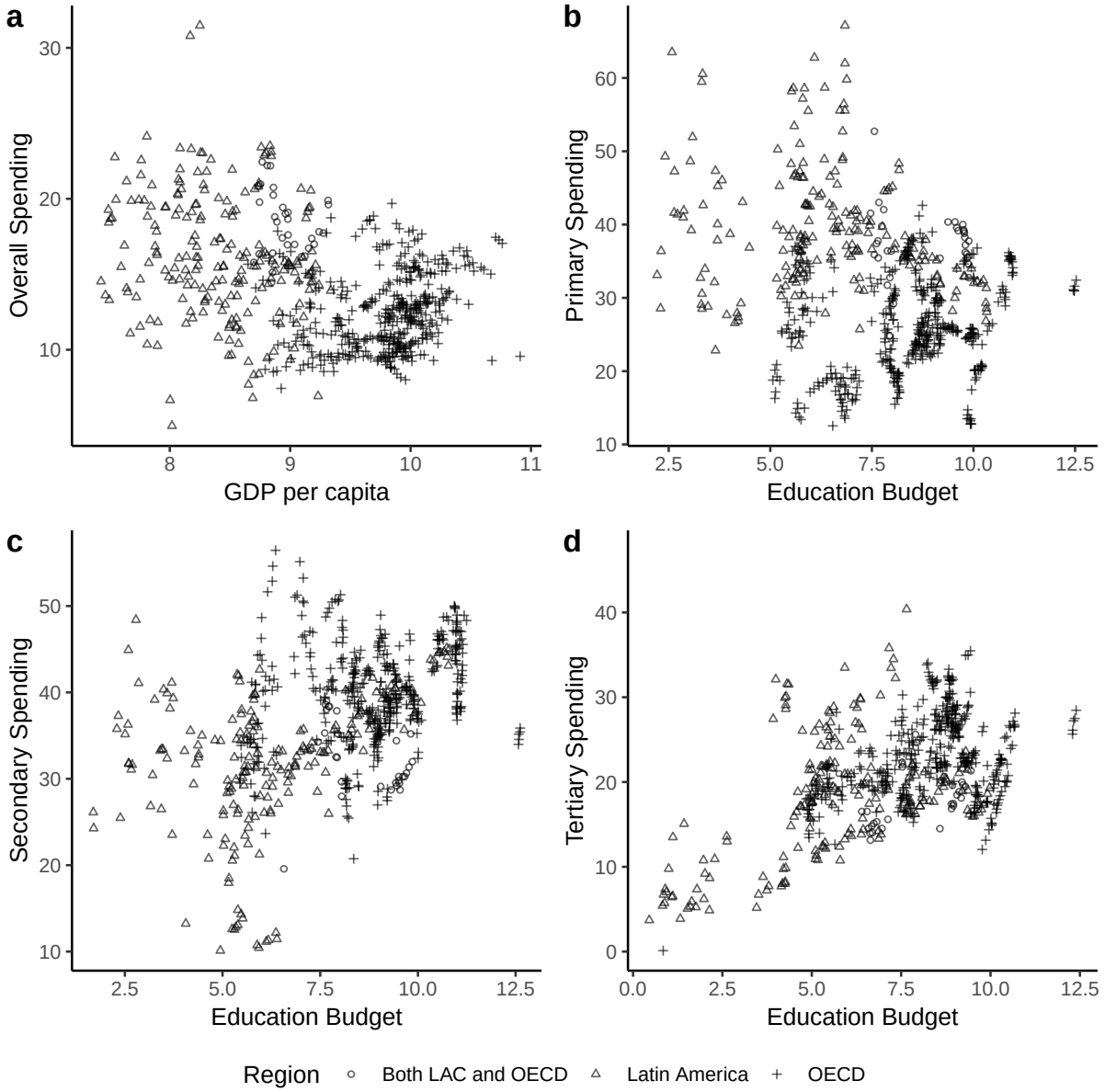

Figure 1.2: Higher variation in education spending in Latin America than in the OECD. Subplot a shows overall spending plotted against logged GDP per capita. Subplots b-d show spending on primary, secondary, and tertiary, respectively, plotted against the log of the overall education budget in constant USD.

Significant proportions of budgets are fixed and much education spending goes to fixed costs, yet there is still meaningful variation in how much is allocated to each part of the education budget. The regional variation in overall spending is over 16% and the mean

within-country variation in overall spending is 8.4%. This compares to just 6.4% variation overall and 0.6% mean within-country variation in the OECD. These differences underscore the importance of studying Latin America separately.

Third, a plethora of model specifications and alternative explanations leaves the literature without a clear consensus on the effect of partisanship on education spending in the studies on OECD countries. A few points have been clarified (that the right favors higher tertiary spending in systems with restricted enrollment, for example, (Ansell 2010)), but there remain many unanswered questions. Given these inconsistencies, the more sparse studies in Latin America and the rest of the developing world merit further investigation. In order to provide a comparison between Latin America and the OECD and link this study with previous work in the area, Appendix B presents a parallel analysis using the OECD as a sample.

Fourth, as Figure 1.2 demonstrates, many Latin American countries are spending at similar or even greater levels than their OECD counterparts. Yet education performance is much lower than would be expected given this spending. The highest performing country, as measured by PISA test scores is Chile, where average scores are half a standard deviation below the global mean (Bos et al. 2016).[23] Where comparable data exists, Latin American countries lag behind peer nations at similar levels of economic development, in contrast to outcomes in health, where the region tends to perform higher than would be expected given its level of development. Despite starting at similar levels of development fifty years ago, Latin American countries now lag significantly behind those of East Asia (Hanushek and Wößmann 2012).

1.4.3 The "missing" center

The presentation of the political spectrum in this project is stylized to a left/right distinction. This is motivated, partially, by a limited number of true centrist parties in the

[23]The absolute highest Latin American scores come from Argentina, but are based solely on schools in Buenos Aires and are thus not a fair comparison with the other countries where the test is administered across a complete sample of schools.

region. Figure 1.3 shows that centrist parties are relatively rare compared with those clearly left of center and right of center.

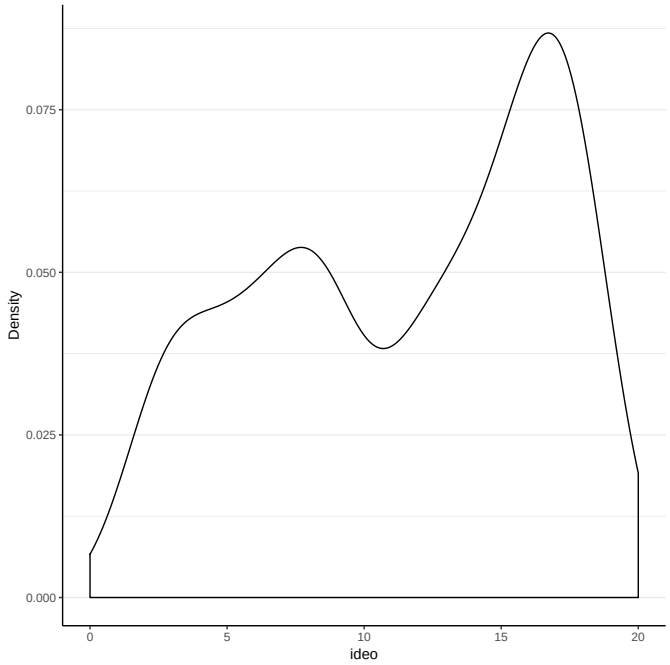

Figure 1.3: Prevalence of parties by ideological position. Observations are party-years.

Although I present parties in a left-right dichotomy, the analytical models in Chapters 2 and 3 use a continuous scale. They imply a linear relationship in which an increase along the ideological scale has a positive, linear relationship with the outcome variable. Alternative specification models in which parties are modeled as distinct categories are included in Appendix D makes no difference to the results presented in the quantitative chapters.

1.4.4 Outline of the work

This project proceeds as follows. Chapter 2 presents a statistical analysis showing that there are very few differences in education spending patterns between left and right. Like previous work on this topic, this project starts by looking at overall levels of education spending. This is an important first question to answer, but it is equally useful to look at disaggregated spending and consider patterns of spending by level (primary, secondary, or tertiary) and type (capital investment, staff expenditures, or other current spending). My

study does precisely that. Moving from outputs to outcomes, I devote Chapter 3 to an analysis of the differences in enrollment, dropout, completion, and test scores between left and right in education. Here again, I show strong evidence that very few differences exist.

In Chapter 4, I propose an alternative explanation for what drives a convergence in education spending and education outcomes between left and right governments. I argue that policy legacies, stakeholder pressures, and expert advice produce the observed convergence. Legacies limit lawmakers, while stakeholder pressures drive left and right toward similar positions. Equally, an increased reliance on outside experts to guide policy contributes to the convergence, as these experts tailor their advice to fit the educational situation, not the political climate.

I explore these findings in greater detail in Chapter 5 using the case of Chile. Chile is an extreme case — the left and right have highly divergent views for the education system and education has long been a salient topic in politics. If left and right ideology matters anywhere, it should matter there. The case study chapter shows that even at the extreme, this ideological divide does not do a good job of explaining either outputs or outcomes in education. I process trace the evolution of education in Chile, showing that policy legacies, stakeholder pressures, and expert advice dominate divergent policy preferences by left and right and lead to convergence in outputs and outcomes.

Finally, Chapter 6 concludes. In addition to summarizing the arguments and evidence put forth in the previous chapters, the conclusion also explores some of the implications of this study. In breaking from past literature, this study suggests that one of the political factors most frequently thought of to affect education does not, in fact, matter. These findings enhance the extant literature on the politics of education and parties in Latin America.

Chapter 2

Partisan Ideology and Convergence on Education Outputs in Latin America

Creating a government budget is an intensely political activity, with left and right parties expressing divergent interests in both the total size of the budget and in its ultimate division between competing programs based on their fundamental beliefs about inequality and its relationship to the state. Budget-making is a zero-sum game in which an increase in one area must be offset by a decrease in another (Wildavsky 1986). Given this political nature and the distinct ideological beliefs about inequality (Luna and Rovira Kaltwasser 2014) and corresponding spending preferences (Levitsky and Roberts 2011a), there are strong reasons to expect that the left and right will devote different percentages of the government budget to education. Further, ideological preferences about inequality should be expected to drive differences in *how* that money is spent. Specifically, we should anticipate that the left spends more than the right overall and devotes greater percentages of its education budget to primary and secondary levels and staff expenditures while the right should be expected to outspend the left in tertiary education, controlling for the size of the school-aged population. Understanding differences in how education budgets are allocated is important because *how* the funds are spent is at least as important as *how much* is spent when looking at education outcomes (World Bank 2004). Previous work has found that the left in Latin America is more likely to spend more on social services and in areas where programs are expected to enhance equity (Huber and Stephens 2012) and education has been tied to this outcome (Hanushek and Wößmann 2007). Are these expectations met? Does partisan ideology predict education spending?

This chapter looks at education spending across Latin America. It shows that education

budgets as a percentage of overall government spending have remained fairly stable over time, as have the distribution of those funds by level and area. It also shows that where variation does exist, partisan ideology has little effect on these distributions. Before looking at the trends, I define here key terms related to education levels and areas.

Some readers may wonder whether standard statistical tests are appropriate in this case. Specifically, these tests rely on a null hypothesis (H_0) that there is no relationship between the variables. The concern is that this does not match the expectation that there *will be* a relationship and that the tests are biased toward my conclusion that there is no relationship. I argue that these tests are, nonetheless, appropriate in this case for three reasons. First, there is no statistical alternative in which the null is formulated to expect a relationship.[1] Second, using these tests is necessary in order to produce a result that can be compared to existing studies. Third, although it is true that the null can only be disproved (not proved itself), the robustness of these models to alternative specifications forms a body of evidence that can only be interpreted as supporting my conclusion that ideology is not a good predictor of education outputs.

2.1 Spending Definitions

Levels Education levels in this study are defined according to the International Standard Classification of Education (ISCED) provided by the United Nations Educational, Scientific and Cultural Organization (UNESCO) (UNESCO Institute for Statistics 2012). In this classification, education is divided into nine levels labeled 0–8. Each level is defined based on a combination of instructional content and style, age and duration, and compulsory status. This section provides a brief overview of the differences between levels, but complete definitions are available in Appendix C.

For the purposes of this project, "primary" education corresponds to ISCED level 1, the first level of mandatory schooling that lasts an average of six years (typically starting

[1]While it is possible to specify a null that a relationship will be either positive or negative, this is rarely done in practice and it remains impossible to specify that there will be *some* relationship.

no earlier than age five and ending no later than age twelve) and is typically taught in classrooms with one primary teacher. In the United States, this would correspond to the popular classifications of "elementary" or "grade school."

"Secondary" education corresponds to levels 2 and 3 (lower and upper secondary). Lower secondary follows primary and represents a transition to more subject-based instruction. Upper secondary builds on lower secondary as the final years of general or vocational training. These two levels correspond to the "middle school" and "high school" levels in U.S. education. Globally, lower secondary is often the last compulsory level of schooling.

"Tertiary" education corresponds to levels 5 and 6 — short-cycle tertiary and bachelor's or equivalent. These non-compulsory levels have restricted entry requirements. Unlike previous levels, the two ISCED levels of tertiary education are not sequential. Any statistics at the tertiary level thus aggregate students in short-cycle and bachelor's programs, which may exist concurrently within a country. Note that my definition of tertiary education excludes ISCED level 4, which corresponds to post-secondary non-tertiary education. This level includes technical training and other programs aimed at improving employable skills. While this type of education is important, it falls outside the definition of true tertiary education and the scope of this project.

Although the specific requirements for any given level of education (including age restrictions) vary between countries, the definitions laid out by UNESCO provide sufficient common ground for comparisons. All statistics provided by UNESCO are constructed to account for variation in educational requirements. Thus, while students in primary education may be of different ages, they are all at an equivalent *stage* of their education.

Any references to "overall" education in this study refer to spending on any level of public education. This includes ISCED levels outside of those that comprise primary, secondary, and tertiary. These three levels account for an average of 88.6% of government education budgets in the sample. Pre-primary and post-secondary non-tertiary education are important in the formation of a complete education system, but are outside the scope of this project because

they represent a small fraction of education spending and have limited data availability in Latin America, where state funded pre-primary education has become more common only in the past few years.

Areas I consider expenditures in "staff," "capital," and "current" areas of the education budget, again defined according to UNESCO standards. Staff expenditures generally cover salaries and benefits for both teaching and non-teaching employees at schools. Capital expenditures are payments for any education-related materials (including buildings and physical plants) that are expected to last for more than one academic year. Current expenses, on the other hand, are those that relate to things consumed within a single year. Appendix C provides complete and official definitions of these categories.

2.2 Education Spending Trends

The World Bank, Inter-American Development Bank, and other international technocratic bodies have called for Latin American countries to increase dramatically the resources they devote to education (UNESCO 2009), even after increased investments brought them to levels comparable to OECD countries, relative to the size of their economies (Puryear 1997). This section presents an overview of the spending trends across the region in response to these calls. In all of the graphs presented below, I group countries into four (mostly) geographic categories for ease of presentation. I label the categories "Southern Cone +," "Caribbean," "Central America," and "Bolivarian +."[2] The only divergences from the geographic groups implied by the names are the inclusion of Mexico in the Southern Cone group and Paraguay with the Bolivarian countries. This was done because these two countries fit the trends of these groups better than their respective geographic groups. The Southern Cone is not a homogeneous block, but Mexico's geographic size, economic performance, and federal structure

[2]Specifically, the categories contain the following countries: "Southern Cone +": Argentina, Brazil, Chile, Mexico, and Uruguay; "Caribbean": Bahamas, Barbados, British Guiana, Dominican Republic, Jamaica, and Trinidad and Tobago; "Central America": Belize, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, and Panama; and "Bolivarian +": Bolivia, Colombia, Ecuador, Paraguay, Peru, and Venezuela.

make it a better fit with those countries than with Central America. Similarly, Paraguay's smaller size, economic performance, and landlocked status make it a better match with the Bolivarian countries than with the Southern Cone (or with Mercosur (the Southern Common Market), e.g., as an alternative grouping).

Figures 2.1 to 2.4 show the spending trends by region. The first plot shows overall spending as a percentage of the total government budget, while the remaining three show primary, secondary, and tertiary, respectively, as a percentage of the government's education budget.

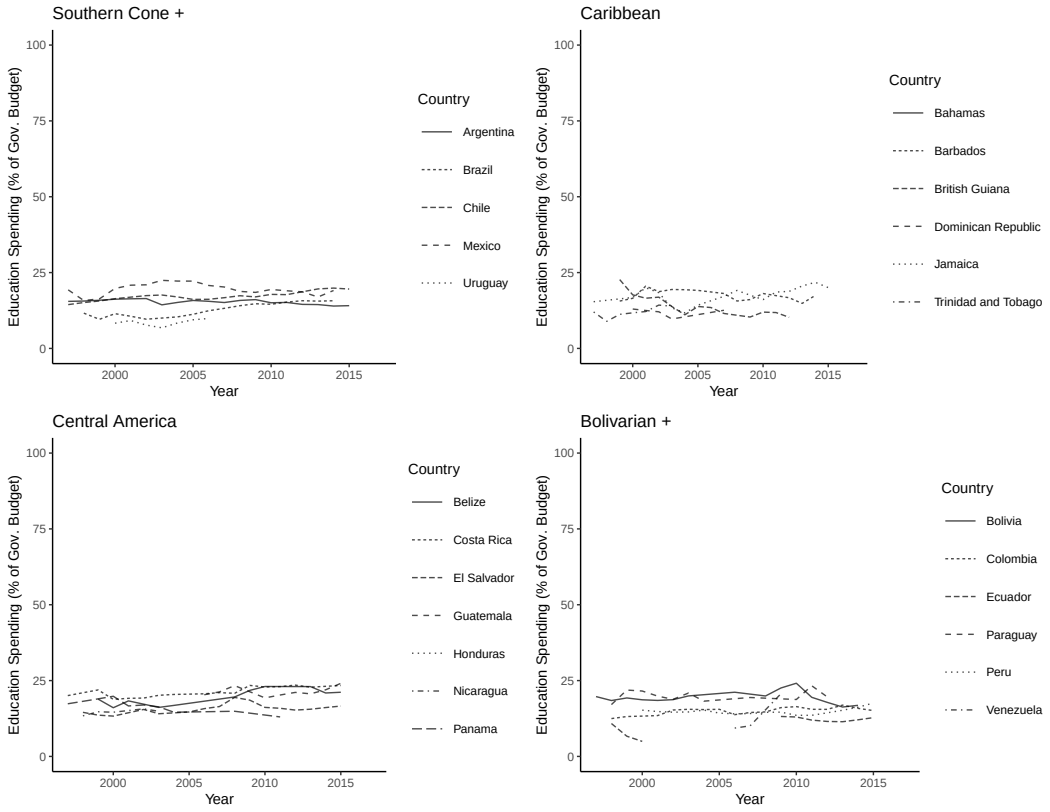

Figure 2.1: Overall Spending on Education by Geographic Cluster and Country

Figure 2.1 shows that within each of the four clustering of countries there is general convergence on overall spending but that there is also some variation between the regions. The Southern Cone and Bolivarian countries both show signs of converging between 10% and 20%, having experienced greater variation in the past. Central American countries, on

the other hand, showed greater convergence in the early 2000s with slightly greater variation in recent years. As a percentage of the government budget these countries are also higher, showing levels upwards of 25% of the total government budget.

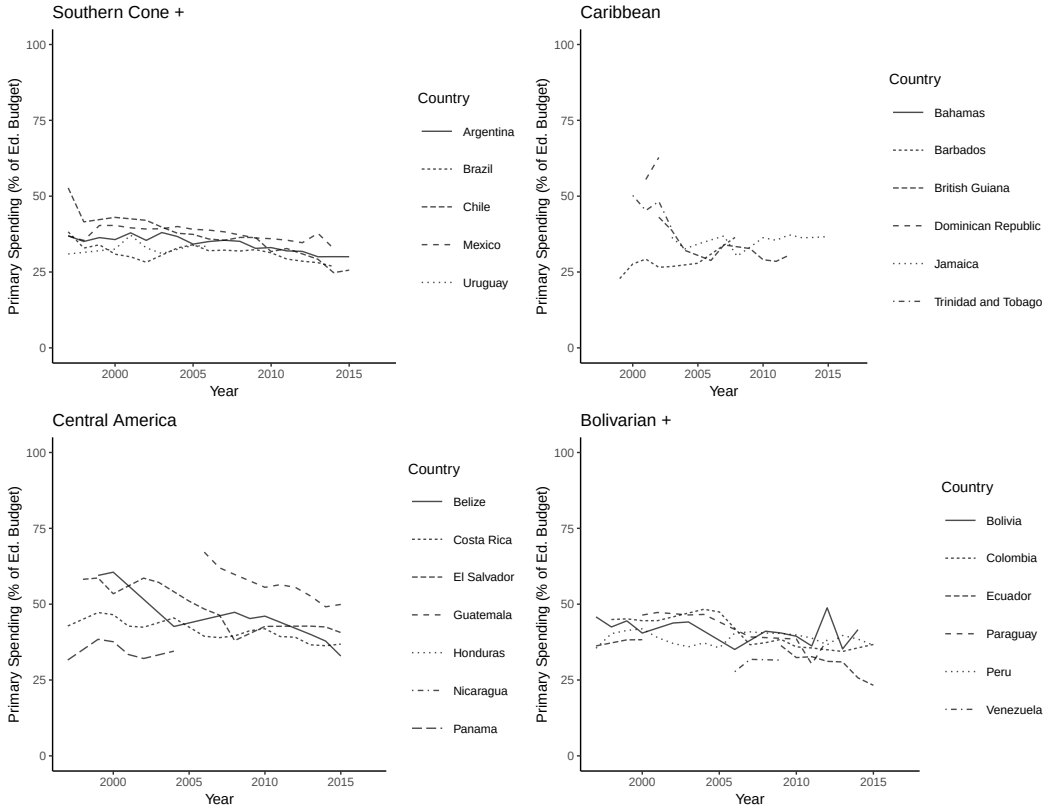

Figure 2.2: Primary Spending on Education by Geographic Cluster and Country

There is a downward trend in primary education spending as a percentage of the education budget across all four groupings, as shown in figure 2.2, with the most pronounced decrease in Central America. Southern Cone countries tend to spend the least of these four groups and Central American the most. This is unsurprising given their relative levels of development.

Figure 2.3 is largely a complement to the previous figure in that all four regions show a general climbing trend in secondary education spending as a percentage of the education budget. The differences between the four regions are less pronounced, however, with most countries spending between 25% and 50% on this level of education. Peru and Guatemala

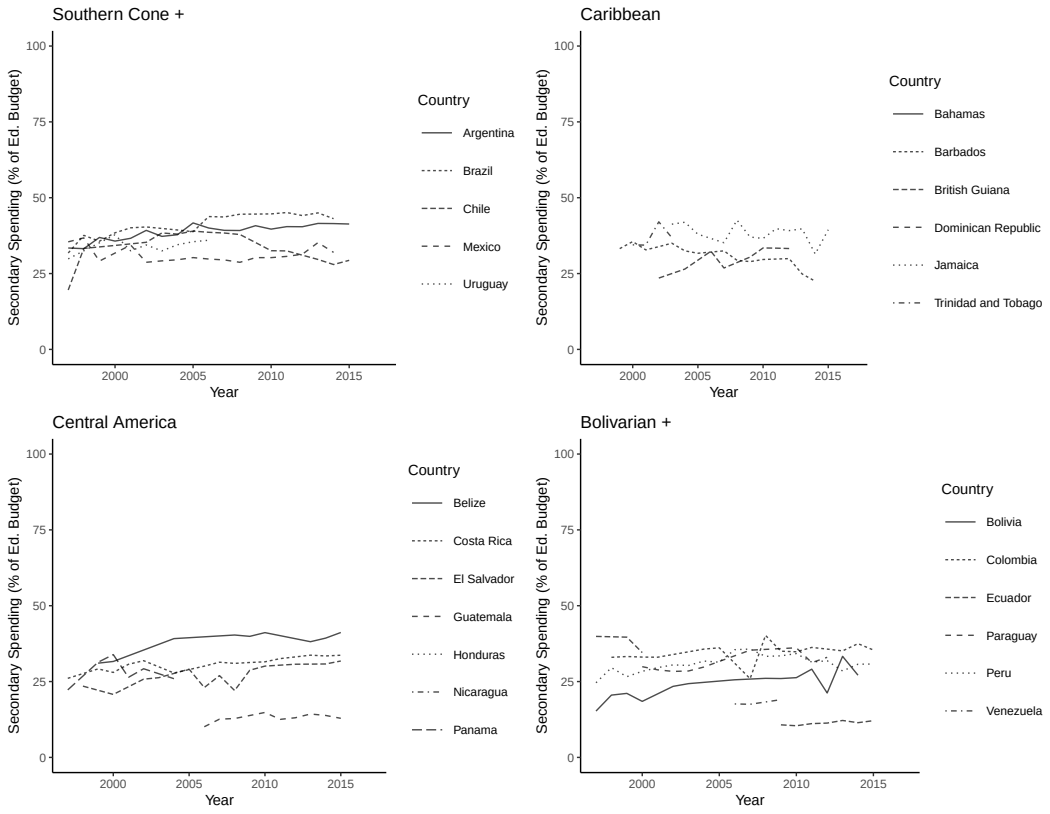

Figure 2.3: Secondary Spending on Education by Geographic Cluster and Country

are the clear exceptions to this trend, with each still spending around 12% of the education budgets on secondary education.

Breaking from the previous trends, figure 2.4 illustrates a high degree of variability both between countries within the four groupings and across the groupings themselves. The Southern Cone countries all spend at similar levels (approximately 20% to 25% of the education budget), but in the Caribbean, Central America, and the Bolivarian countries, percentages range from less than 5% to over 40%. Further, some countries appear to have upward trends in tertiary spending, some are fairly constant, and a few show precipitous decreases.

Spending patterns by area are a second way to consider trends in how governments allocate their education budgets. Figures 2.5, 2.6, and 2.7 look at this. All present spending in their respective area as a percentage of the total education budget.

Figure 2.5 shows great variation in staff expenditures. In all cases this area represents at

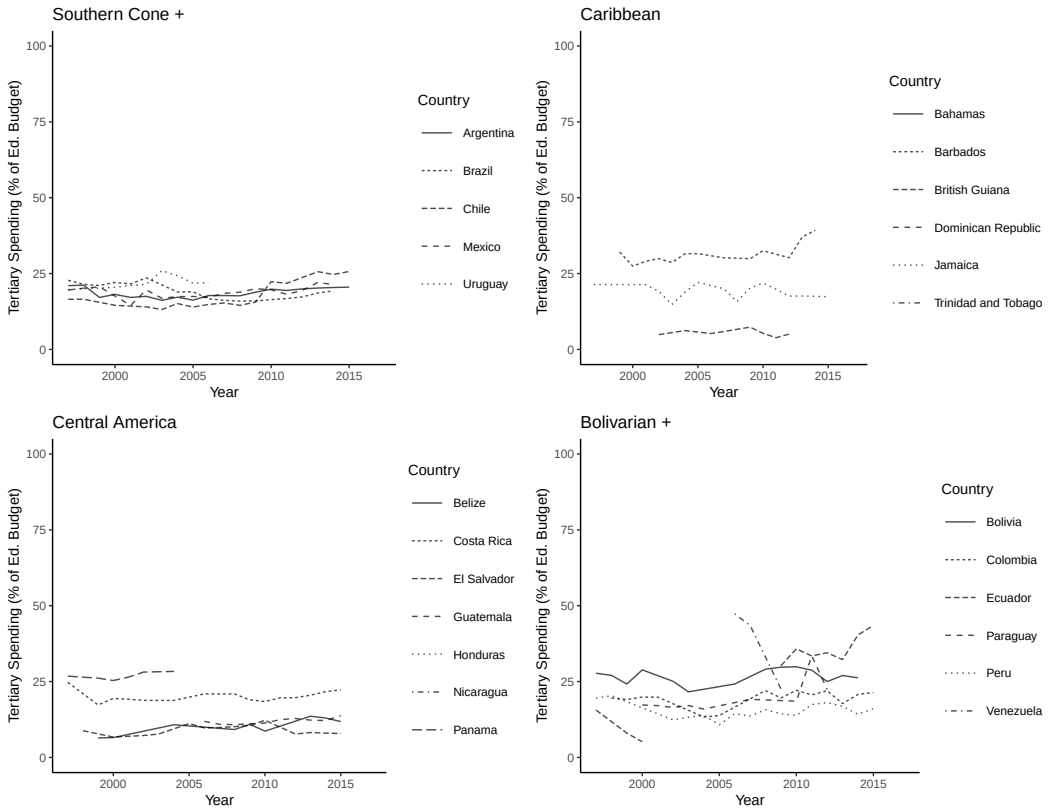

Figure 2.4: Tertiary Spending on Education by Geographic Cluster and Country

least half of the education budget, but the percentage varies greatly by country (Argentina consistently spends over 80% on staff while El Salvador dipped toward the 50% mark at one point). Further, many countries vary greatly over time, with some making dramatic changes in the direction of their respective trajectories multiple times in the observed period.

In contrast to staff expenditures Figure 2.6 shows there is greater consistency in capital expenditures in all regions. The Bolivarian countries appear to be trending upwards in this area of spending and are toward the top of the scale for this category. In all cases, however, capital expenditures are far less than staff expenditures.

Finally, Figure 2.7 shows current expenditures over time for Latin American countries. Current expenditures are largely the inverse of staff spending. They represent a significant portion of the budget (less than staff, but more than capital). They also show less variability than staff expenditures but more than capital. In recent years, most countries devote

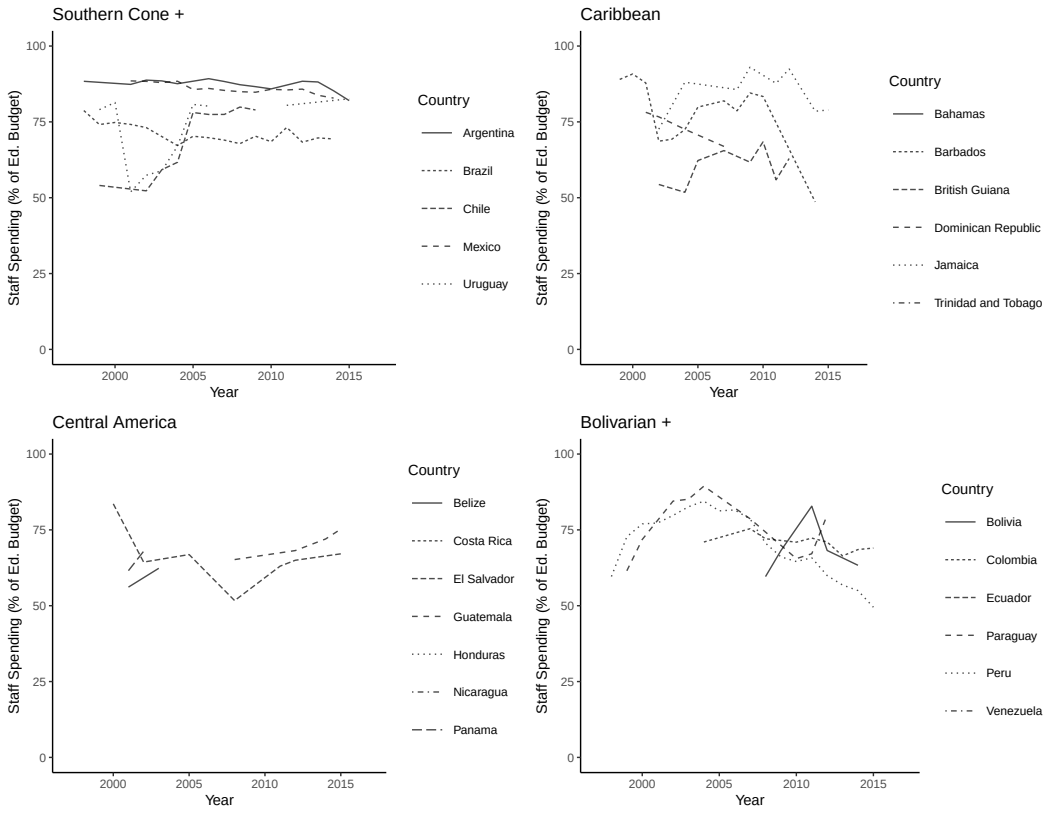

Figure 2.5: Staff Spending by Geographic Cluster and Country

25% or less of their education budgets to current expenditures (Peru and Barbados are the exceptions), though this was much more common prior to 2010.

What factors are responsible for producing these trends? How much of the variation is systematically linked to a left-right partisan ideological divide? I attempt to answer these questions in a statistical analysis in the following section.

2.3 Empirical Analysis

I evaluate the expectations presented above through a series of statistical tests. I look first at aggregate spending: which parties are most likely to devote the greatest share of government resources to education? Then I break spending down by level and area and consider the differences at the primary, secondary, and tertiary levels and in staff, capital, and current expenditures. I find that, contrary to expectations, partisan ideology is a poor

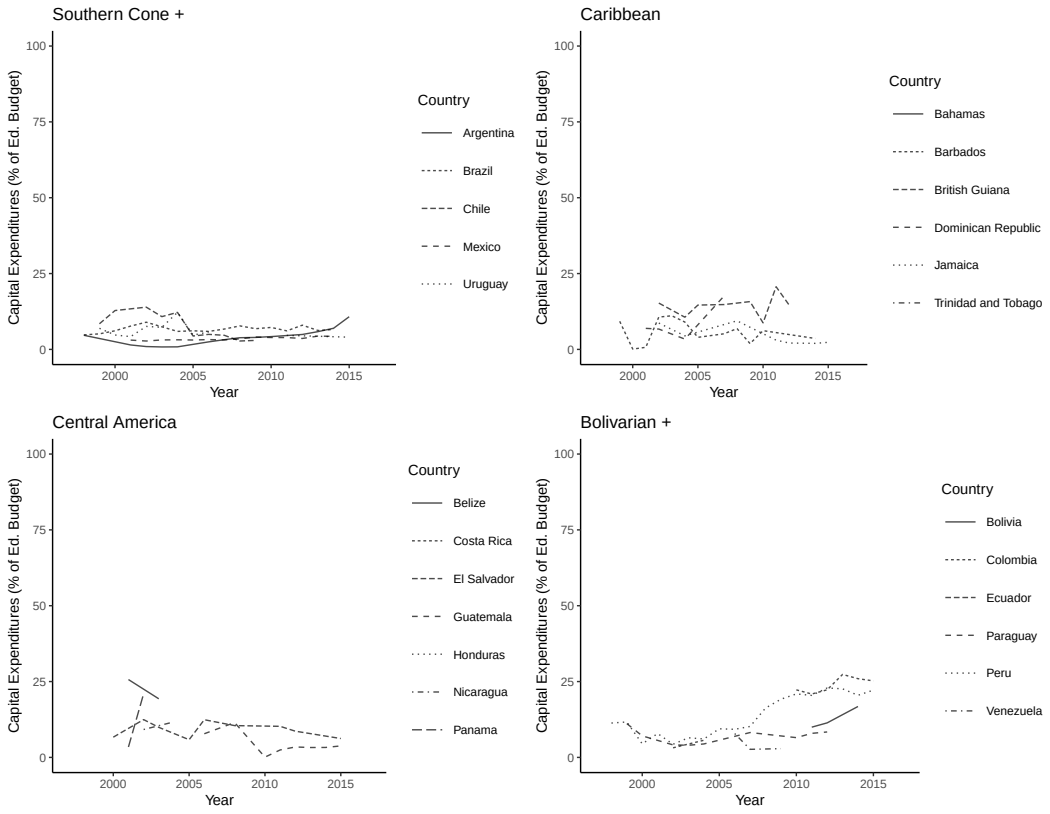

Figure 2.6: Capital Expenditures by Geographic Cluster and Country

predictor of overall spending or expenditures by level or area.

How governments spend their education budgets is just as important as how *much* they spend (Busso et al. 2017). Looking at spending by level and area starts to address this concern, but still paints an incomplete picture. Whether tertiary spending goes towards scholarships for the highest performing students or into affirmative action programs, for example, will have dramatically different consequences for outcomes at that level. Such an analysis is outside the scope of this project, but future research would do well to examine this question.

Note also that not all education spending is determined at the national level. In some countries, states (or provinces) and municipalities may also play a role in setting education spending levels. The analyses presented here are all focused at the national level. Inconsistency in whether subnational governments play a role in education budgets as well as

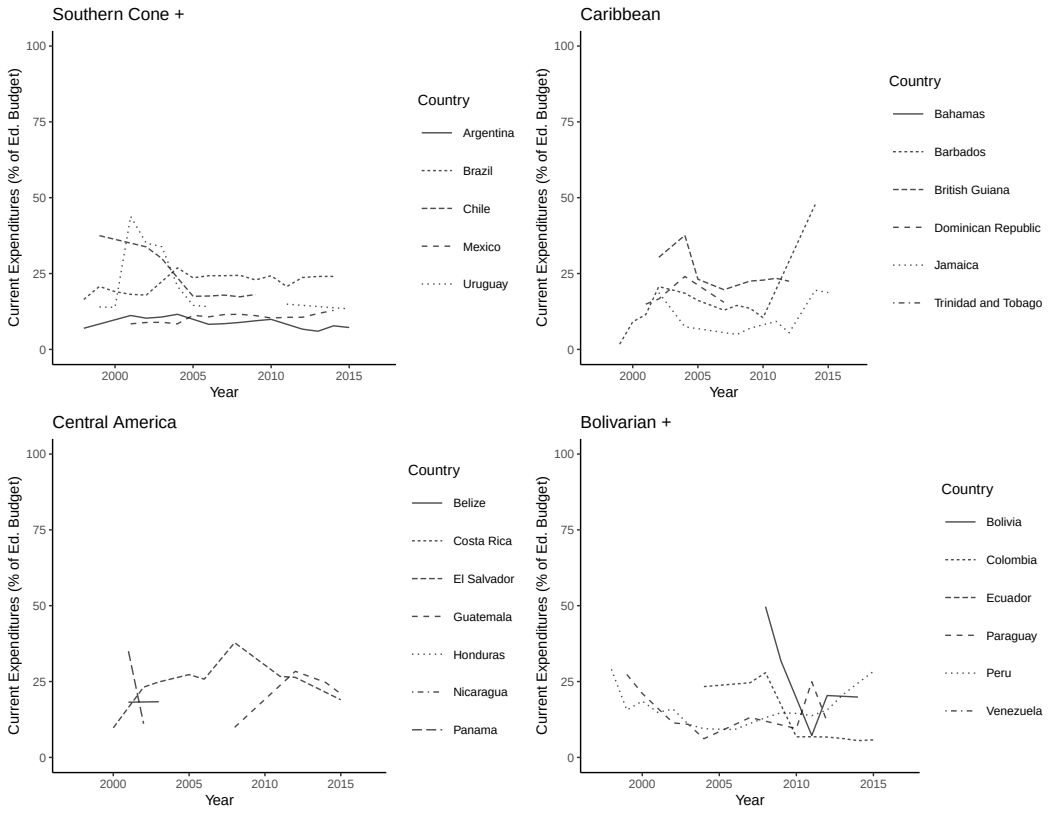

Figure 2.7: Current Expenditures by Geographic Cluster and Country

insufficient data coverage prevent a similar analysis of the subnatinal level. Whether any such spending occurs is captured in the models below in the country fixed-effects. An alternative specification using a federalism dummy variable yields substantively similar results.

2.3.1 Data

Data for the statistical analysis comes from existing secondary sources. All education related data is provided by UNESCO and accessed through the World Bank's Education Statistics Database. Other covariates are provided by various sources, as explained below.

Latin American Sample

The sample for this study is drawn from the following countries from Latin America and the Caribbean: Argentina, Bahamas, Barbados, Belize, Bolivia, Brazil, British Guiana, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras,

Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, Trinidad and Tobago, Uruguay, and Venezuela. There is no standard definition of "Latin America." This list represents the most comprehensive list of independent countries in the Western Hemisphere, barring Canada and the United States, that have at least partial data available during the time period studied. Not all countries have the same level of coverage on all education or economic statistics, so not all are included in every model and panels are unbalanced.

Education statistics prior to 1997 are not available in nearly all cases. UNESCO changed their definitions of levels of education and other fundamental concepts in that year, creating an irreconcilable break in the data. The numbers available prior to 1997 are simply incompatible with those that come after.[3] This is a serious drawback of education statistics. However, this also restricts the sample to an extended period of democratic rule in nearly all countries in the sample. Venezuela is an exception, as it moved away from democracy under Hugo Chávez. While other countries have shown some non-democratic (or, rather, anti-democratic) tendencies during this period as well, all remain classified as democratic by standard measures.

Dependent Variables

Government spending on education is the dependent variable of interest in this chapter. Overall education spending is measured as all government spending on education as a percentage of the government budget. All remaining models look at spending on a level or an area as a percentage of the education budget.[4] This operationalization allows comparison across countries because the absolute size of government budgets varies dramatically depending on a range of political, economic, and demographic factors. Additionally, measuring the

[3]Although these numbers can be found in printed volumes, they also contain inconsistency between years and countries. As a result, running two analyses, one for data prior to 1997 and one after, or using a dummy variable to mark the point of divergence is not a viable alternative option.

[4]As noted above, these three levels account for an average of 88.6% of the education in the sample. An alternative specification of these dependent variables as a percentage of the three level total yields substantively similar results to the ones shown below. This results should be unsurprising because the correlation between the three levels measured in the two forms are 0.92, 0.94, and 0.98, respectively.

spending by level or area as a percentage of the education budget captures the priority tradeoffs faced by politicians who must allocate finite resources between many competing demands — holding the size of the education budget constant, any dollar spent on primary education staff is a dollar than cannot be spent on secondary education capital expenses, for example. Expenditures by area are also calculated as a percentage of the total education budget for a given year.

Explanatory Variables

The explanatory variable of theoretical interest in this study is partisan ideology. There exists a debate on how ideology should be measured. First, there is a divide between those who prefer categorical (left, center, and right, for example) or even binary measures and those who prefer a continuous measure. Second, there is a divide in the literature between those who measure ideology based on platforms, manifestos, or other statements, those who use expert surveys, and those who do so using policy enacted under the party. Each approach has inherent advantages and disadvantages. For the purposes of this project, I opt for a continuous measure based on expert opinion.

Specifically, I use the party ideology measure developed by Baker and Greene (2011). This variable measures ideology on a continuous scale from 1 to 20, with 1 marking the extreme left and 20 the extreme right. Parties are coded primarily using data from a survey of experts from Wiesehomeier and Benoit (2009), where experts were asked to rate parties based on policy poitions in a number of dimensions. Expert surveys offer several advantages for measurement including a high degree of accuracy and reliability (Benoit and Laver 2007) and their ability to aggregate a large amount of data from individuals with deep knowledge of specific cases. They have been challenged because of uncertainty about the exact criteria by which experts judge parties and whether these can be translated into a common policy space (Budge 2000). Baker and Greene's measure has withstood scrutiny, however, and its coverage for the sample of countries employed is unmatched.

I conduct robustness checks with two other measures of party ideology in Latin America. The first is provided by Rosas (2005) and the second comes from Coppedge (1997) as extended by Huber and Stephens (2012) (referred to herein as the CHS coding and data). Appendix D discusses these alternative measures and their results in greater detail, all of which are substantively similar to those presented here. I use the Baker and Greene measure as my benchmark because it aligns well with the definition of left and right that I employ. While Coppedge's measure is used elsewhere, its main strength comes from an attempt to avoid post-hoc classification of parties. In this study, this is not a primary concern, since I am interested in the policy behavior of left and right. Coppedge's measure differs from the others in that it employs a categorical classification of parties. That the results using this measure are so similar to those of the continuous measures should be viewed as evidence that the null finding is not driven by convergence of center-left and center-right, but by parties across the entire political spectrum.

In addition to partisan ideology, I include several political, economic, and demographic covariates, following the bulk of the literature in these modeling decisions. Previous research has found a positive relationship between democracy and education spending (Brown and Hunter 2004; Stasavage 2005; Rudra 2005; Wibbels 2006). I control for level of democracy using the polyarchy measure from the Varieties of Democracy (V-Dem) project (Coppedge et al. 2018; Pemstein et al. 2015). V-Dem's polyarchy measure is highly correlated with other popular measures of democracy, including the polity2 measure (Marshall 2003). Substituting other measures makes no difference in the results presented below.

Although the executive is by far the most powerful branch in Latin American presidential systems, legislatures play an increasingly important role (Smith 2012). Further, even in cases where they are still subordinate, split governments can, nonetheless, create roadblocks for executive agendas (Aleman 2006). Thus, I control for the percentage of the lower house controlled by the same party as the executive. This data comes from the CHS dataset. Note that this variable does not control for the ideology of the legislature, but instead attempts

to capture the degree to which the legislature can act as a veto point in the executive's policy agenda. While this control is important, focusing on the executive remains a valid approach because most legislation in the region is introduced by the executive. In this way the executive branch dominates the legislative agenda.

The models include a measure of GDP per capita, as measured in constant 2010 dollars by the World Bank as a control for the size of the economy. This is important because, *ceteris paribus*, a larger economy increases the government's budget and, by extension, the amount of discretionary funds available. Instead of using GDP data directly from the World Bank, I use an estimated series from Fariss et al. (2017). The authors generate this estimate using a latent traits model that incorporates additional sources of information about GDP and thus produces both better estimates and a complete time series.

Previous research shows that economic variables play a crucial role in the provision of education. Thus, I include three additional economic covariates. The first is GDP growth, a standard control in similar studies, provided by V-Dem. The second is total government spending on education in constant US dollars.[5] I include total government spending because education systems require sizable fixed costs and the absolute value of resources can affect distributive decisions. In the overall model in the Latin American sample I also control for external debt service. This control is included only in the overall model because while external debt may affect the allocation of funds for education, there is no theoretical reason to expect it to affect the distribution of those funds across levels or areas. Finally, models with level or area of education as the dependent variable also include controls for overall education budget size.

Most countries in Latin America have experienced periods of non-democratic rule under military or other authoritarian regimes during the second half of the 20th century. Previous research has shown that authoritarian regimes tend to limit education spending to a greater degree than democratic ones during economic recessions (Brown and Hunter 1999). As a

[5]This control is omitted in overall spending model since it is the dependent variable in that regression.

result, it is possible that the economic situation at the time countries transitioned to democracy could set a precedent in education spending that is perpetuated through time. There are, however, several reasons to believe that this should not affect the models presented here. First, democratic governments have had ample time to adjust their budgetary preferences since the transition. Second, all experienced the international push for greater education spending during the 1990s. Third, while an ideal model would control for education spending at the time of transition to democracy, country-fixed effects will capture any residual effect in the absence of appropriate data for this control.

The models include several demographic covariates to account for population differences that have been shown to have an effect on education in various contexts. First, I control for the level of urbanization, as spending requirements in education vary drastically between urban and rural settings (Guthrie 1979). Second, I control for the average overall level of education, as higher levels among adults are likely to produce higher spending preferences (Arends-Kuenning and Duryea 2006; Azam and Bhatt 2015). This variable also captures one view of the state of education development in a country. Higher levels of average education in the adult population are indicative of more developed and longer established education systems. Third, I control for the size of the school-aged population. As populations grow and the number of school-aged children increases there will be increased demand for education. Economic development tends to produce, first, an increase in the population and, second, a decrease. Thus development may also lead to smaller numbers of school-aged individuals and thus decreased demand for primary and secondary education. For the overall spending model I control for both the ratio of children under the age of 15 to the working population and total population. The ratio of youth to working adults has an effect on the relative balance of different social spending demands, and the government's ability to provide them and total population will drive education demand. For all models that look at spending at a particular level, I control for the number of students at that level as a percentage of all students. I define the population of all students as the sum of the number of students at

the official age for primary, secondary, or tertiary education. This accounts for differences in education requirements across countries. The first three demographic variables come from V-Dem. The total population is also provided by Fariss et al. (2017) and incorporates multiple sources to produce an estimated time series.

Finally, I include country dummies to control for country-specific trends. This addition means the results look at within-country variation, an appropriate comparison for this study because parties only compete against one another within a single country. Importantly, this also accounts for federalism. Argentina, Brazil, and Mexico have federal structures in which provinces (in Argentina) and states (in Brazil and Mexico) have a degree of political autonomy and non-trivial responsibilities for funding and administering the school system.[6] Failing to take this into account would bias estimates of spending on the levels of education, because the national government has greater freedom to devote resources to tertiary education. Including country-fixed effects solves this problem.[7]

2.3.2 Modeling Time

Unlike the analysis of education outcomes (see Chapter 3), modeling time is relatively easy in the analysis of education spending. Budgets are made on an annual basis, so educational allotments are the responsibility of those in power at the time the budget was made. Since budgets are typically made one year out (as opposed to being made and implemented within the same year), the government at time t is responsible for the budget at time $t + 1$. For this reason, all models presented below use a one year lead on the dependent variable.

Regional and global economic conditions as well as the tendency for policy prescriptions to diffuse and change over time suggest that there may be time-related trends in education spending that must be accounted for. I control for time trends by including time and time squared variables.

Garritzmann and Seng (2016) argue that most of the models in the literature on party

[6]These arrangements have changed over time, which is also captured by the country fixed-effects.
[7]Excluding these countries entirely from the analysis makes no difference for the results.

ideology and policy spending are misspecified because they look at the country-year as the unit of analysis. Instead, they posit that the proper unit of analysis is the administration. Although this varies in duration, they believe it better captures the theoretical assumption that different administrations will implement different policy priorities and budgetary allotments. In their reanalysis of education spending in the OECD using the administration as the unit of analysis these authors find no relationship between party and education spending. This research draws attention to the importance of modeling decisions and the assumptions that underpin them.

I argue that the country-year is the appropriate unit of analysis for education outputs. Budgets are created every year, each time forcing politicians to allocate (or reallocate) funds according to their priorities. Even if neither the overall ideology of the legislature nor the preferences of any single legislator (or executive) changes in the span of a single non-election year, it is still reasonable to expect shifts in the distribution of resources through the government's budget. Externalities and shocks may impose new demands or reduce previous demands year over year. Economic crises occur; debts come due; unexpected events make certain policy areas more salient. For these reasons, I follow the bulk of the literature in using country-year observations, yet like Garritzmann and Seng (ibid.), I also find there to be little relationship between partisan ideology and education outputs.

2.3.3 Interpolation

Coverage of education statistics in Latin America is far from complete. I deal with this problem through linear interpolation. Budgets and the relative allocation of resources change on a yearly basis, but the variables of interest all demonstrate strong linear trends, suggesting that such a strategy is appropriate in this case. The models presented below fill a maximum gap of 3 years. No extrapolation is performed on either end of the time series. Interpolation is only performed on the dependent spending variables and not any of the economic controls. I also run the same models using data with a 5 year maximum interpolation. Results remain

robust to this longer gap.

In addition, I rerun the analysis using a "noisy" interpolation in which random noise was added to each interpolated value. The was drawn from a normal distribution with mean 0 and standard deviation equal to the standard deviation in the yearly change of value within each country. I bound these interpolated values at 0 on the lower end. I created ten such datasets and then combined results from separate regressions on each following the standard procedure used with multiple imputation. The reanalysis using these noisy interpolations confirms the findings presented below.

Interpolation vs. Imputation

Multiple imputation has become a popular method for dealing with missing data and software packages such as Amelia II in R make implementation of this approach very easy (Blackwell, Honaker, and King 2015). Two problems prevent its use with this data. First, the data do not meet the fundamental assumption of the imputation model: that missing data be "missing completely at random" (MCAR). In fact, the non-randomness of missing data does not even meet the weaker version of the assumption — "missing at random" (MAR) (King et al. 2001). Instead, some countries are much more likely to have missing values than others.

Even if this assumption were ignored completely, the pattern of missingness still creates a mathematically intractable problem. Some country-year observations have either too little data or even complete missingness. This results in matrices that are singular or non-invertible and thus imputation cannot be performed.

Various Bayesian bootstrapping methods may be feasible in this situation, but I argue that the interpolated points remain a reasonable "best guess" for the missing values. The strong linear trends exhibited by the time series along with the tendency to use the previous value as a starting point in the budgetary process (Jones and Baumgartner 2005), suggest that interpolation is reasonable here.

Figure 2.8 shows a typical variable with interpolated and non-interpolated points. The

figure shows that there is a strong linear pattern to spending and adds support to the belief that the interpolated values are credible estimates.

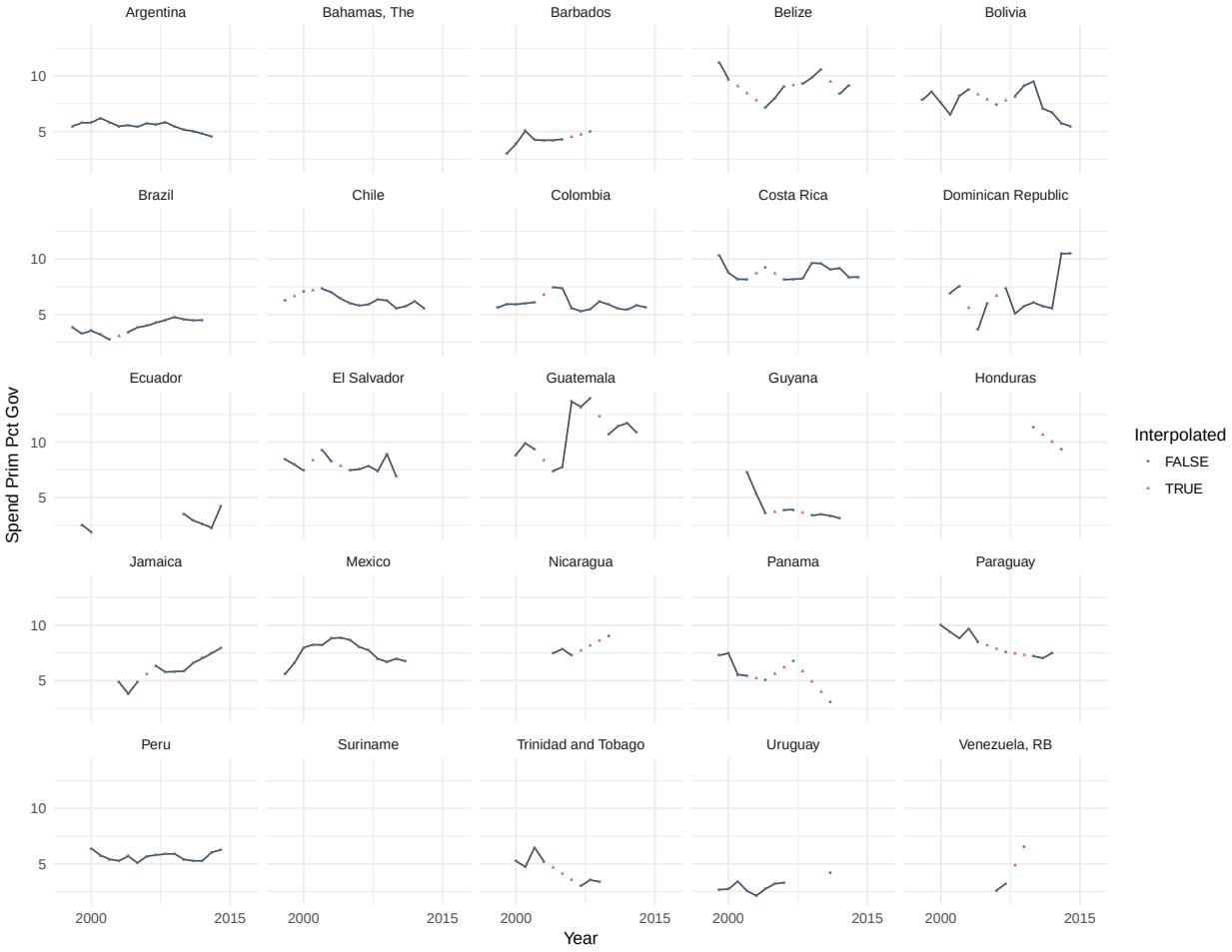

Figure 2.8: Primary spending as a percentage of government education spending by country. Red triangular points have been interpolated, blue circular points are observed. Points have been connected with lines in cases with at least two consecutive years of observed data. Maximum interpolated gap is 3 years.

2.4 Results & Discussion

Chapter 1 laid out the expectations that the left would outspend the right overall and would devote greater shares of its education budget to primary and secondary by level and staff expenditures by area. It also presented the expectation that the right would outspend the left at the tertiary level. The analysis demonstrates that none of these expectations are

borne out in the data.

Table 2.1 presents the results from main models for overall education spending and spending by level.[8] The findings suggest that partisan ideology is not a strong explanatory variable for these outcomes. The F-statistics, however, indicate that the overall models are significant and the R^2 values show they explain a high percentage of the variance.

	Overall	Primary	Secondary	Tertiary
Ideology	−0.025	−0.016	−0.375***	−0.063
	(−0.585)	(−0.221)	(−4.284)	(−0.768)
Debt Service	−0.017			
	(−1.442)			
Polyarchy	−5.107	−2.460	2.593	−7.556
	(−1.820)	(−0.448)	(0.417)	(−1.260)
GDP per capita	−1.000	−6.657	−4.144	3.628
	(−0.298)	(−1.375)	(−0.751)	(0.701)
Urbanization	−1.287	−59.529	−128.458***	28.107
	(−0.064)	(−1.915)	(−3.481)	(0.817)
Average education	16.610***	−1.287	15.665*	−15.247*
	(4.472)	(−0.208)	(2.229)	(−2.238)
Growth	4.163	7.872	6.030	−10.842*
	(1.691)	(1.642)	(1.101)	(−2.059)
School-aged population	−0.220			
	(−1.860)			
Total population	−12.217			
	(−1.237)			
Primary-aged population		107.782**		
		(2.832)		
Secondary-aged population			−18.829	
			(−0.315)	
Tertiary-aged population				95.102*
				(2.613)
Lower house share	0.669	2.889	−8.484***	2.610
	(0.564)	(1.290)	(−3.382)	(1.068)
Overall education spending		0.868	−9.665***	9.953***
		(0.393)	(−3.841)	(4.107)
Time Controls	✓	✓	✓	✓
Country dummies	✓	✓	✓	✓
Observations	154	157	155	155
R^2	0.88	0.90	0.86	0.78
F Statistic	38.13***	44.12***	31.07***	17.85***

Note: *p<0.05; **P<0.01; ***p<0.01

Table 2.1: Spending by level in Latin America

The negative and significant coefficient at the secondary level suggests that the left spends more of its education budget on secondary than the right. Figure 2.9 shows the marginal effect of ideology on secondary education spending in Latin America.

Although this finding is in keeping with expectations, this plot makes clear that the substantive magnitude of the effect is quite small. Moving from the extreme left end of

[8] A presentation of simple bivariate results can be found in Table D.4 in Appendix D. These results suggest that, in some cases, ideology can predict spending. However, if a statistical model is a simplified view of the world and a data generation process, then these models are ones in which education spending is determined absent consideration of number of students, national economic situation, or current state of education development. I argue that these are models that carry little to no substantive meaning because this simplification is so extreme and so unrealistic.

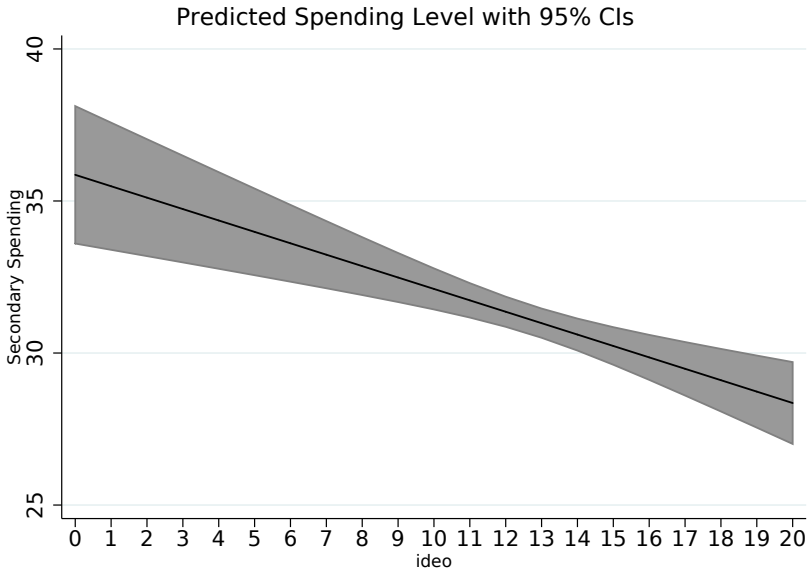

Figure 2.9: Predicted spending levels for secondary education. All covariates are held at their mean.

the spectrum to the extreme right is estimated to have an effect around -7.5 points (i.e. spending on secondary as a percentage of the overall education budget would be -7.5 percent lower). While this difference can be substantively meaningful within the tight constraints of the budget-making process, swings of ideology that extreme are not observed in the real world. The average change from one administration to another is -1.49 points overall (on a 20 points scale). Within this, the mean shift to the right is 4.73 and the mean shift to the left is -4.69. Thus, the expected change in secondary education spending as a percentage of the total education budget for an average change in administration is 0.56% overall and 1.76% and -1.78% for shifts to the left and right, respectively.

Ideology is not a statistically significant explanatory variable for tertiary education spending, contrasting previously published findings based on a sample of OECD countries in Psacharopoulos and Patrinos (2004), Ansell (2008b), Ansell and Samuels (2010), and Rauh, Kirchner, and Kappe (2011). The Latin American context of lower levels of development likely contributes to this result. Although I have controlled for economic factors, lower over-

all development and lower overall education both create greater demands for primary and secondary education to take precedence over tertiary.

	Staff	Capital	Current
Ideology	−0.053	0.430**	−0.264
	(−0.187)	(3.318)	(−0.968)
Debt Service			
Polyarchy	9.806	5.716	−8.290
	(0.629)	(0.798)	(−0.549)
GDP per capita	4.653	6.259	2.929
	(0.267)	(0.856)	(0.174)
Urbanization	81.793	41.870	−60.408
	(0.496)	(0.684)	(−0.379)
Average education	−66.681**	23.935**	37.748
	(−3.057)	(2.641)	(1.789)
Growth	31.064*	−0.288	−22.195
	(2.221)	(−0.044)	(−1.641)
School-aged population	−30.338	−60.764*	43.465
	(−0.476)	(−2.417)	(0.705)
Lower house share	10.861	1.171	−4.731
	(1.443)	(0.371)	(−0.650)
Overall education spending	−8.211	−6.870	5.667
	(−0.937)	(−1.723)	(0.669)
Time Controls	✓	✓	✓
Country dummies	✓	✓	✓
Observations	120	119	120
R^2	0.64	0.60	0.54
F Statistic	6.82***	5.67***	4.49***

Note: *p<0.05; **P<0.01; ***p<0.01

Table 2.2: Spending by area in Latin America

Table 2.2 shows that ideology is a significant predictor of capital expenditures, with the right spending more of their education budget on this area than the left. As with the finding on secondary spending above, the substantive magnitude of this effect is very small — an average rightward shift would increase capital spending as a percentage of the total education budget by only 2.04%. There are no significant differences on staff or current expenditures, however. These findings also cut against expectations that party ideology should be a predictor of *how* education money is spent. Specifically, it is surprising that the left does *not* spend more on staff give its longstanding relationship with teachers' unions.

The lack of significance on nearly any other variables is also a surprising finding, especially when the models appear to fit the data well overall. Country-fixed effects account for part of the overall fit, but the R^2 and f-statistics remain reasonably high even when these are removed. I refrain from any attempts to explain the lack of significance on these other variables because doing so would be a clear post-hoc justification, lacking theoretical support. These surprising results should be investigated further in future research.

The results presented support two conclusions. First, party ideology does not predict overall levels of education spending in Latin America. There is no evidence that either the left or the right devotes greater shares of the government budget to education policy. Second, the only differences between left and right on any level or area of education spending is very minor in substantive terms. There is statistically significant evidence that the left spends more on secondary education than the right and that the right spends more on capital expenses than the left. In real terms, however, the differences are small.

The sum of these trends is that party ideology is a generally poor predictor of education spending. Faced with similar challenges and similar budgets with which to confront these challenges, left and right governments are deciding to spend their money in similar ways. There remain, however, reasons to expect that even if the left and right spend similar amounts, they may still produce different outcomes. The following chapter explores the connection between partisan ideology and education access and quality.

Chapter 3

Party Ideology and Convergence on Education Outcomes in Latin America

The previous chapter demonstrated that there are few differences between political left and right in terms of education spending decisions and where differences exist, they are substantively small. Even in the absence of greater connections between ideology and education spending, there remain strong reasons to believe that the outcomes produced under left and right administrations will differ. Outcomes are determined both indirectly through outputs and directly through policy.[1] Consider primary enrollment, for example. Strategies to increase enrollment could include a range of options including punitive measures (hiring truancy officers), material incentives (conditional cash transfers), or reduction of barriers (providing free lunches or uniforms). Further, any of these efforts could be focused within a given geographic region, target the lowest-performing schools, or include means-testing for participation. All of these policy decisions would directly affect enrollment outcomes. Funding for these programs would have an effect on measured outcomes as well, but only indirectly through the policies themselves. Because policy has its own direct effect on outcomes, it is possible that left and right will differ on them despite spending at nearly identical levels.

Preferences diverge between the two ends of the political spectrum on important questions about system management and policy priorities. Indeed, in an analysis of the challenges in education in Latin America Puryear (1997) argues that the increase in education spending during the 1990s indicates that funding was not the primary problem, but rather, that among

[1]Note that additional outside non-policy factors can also affect education outcomes. For example, external shocks (economic crises or natural disasters, for example) may force students out of school unexpectedly.

the obstacles to further reform are political factors. Twenty years later, Busso et al. (2017, p. 5) offer a similarly blunt conclusion: "money is not the only, or main, issue."

Governments can choose to prioritize different aspects of education in their policy through the selection of bureaucratic leadership, education system administration, or legislative agendas. A new administration could shift the focus at the education ministry from secondary curriculum to primary attendance rates, for example, without affecting spending on either level. The shifts can produce changes in outcome. To reiterate the expectations laid out in Chapter 1, given the left's commitment to enhancing equity of outcomes, we should expect the left to outperform the right on measures of *quality* and that these outcomes will be more equitably distributed under the left. In contrast, we should expect the right, which favors equality of opportunity to outperform the left on measures of *access* and for these outcomes to be more equitably distributed under the right.

Are these expectations borne out in reality? I consider both access and quality of education along with whether these outcomes are distributed equitably. That is, how much education are students receiving, is it *good* education, and are all students achieving or only a systematic subset? This chapter conducts an empirical analysis into the connection between left-right partisan ideology and enrollment rates, completion rates, transition rates, dropout rates, and test scores. Contrary to expectations, I find no compelling evidence that either left or right produces better education outcomes in terms of quantity or quality, and only weakly suggestive evidence that the left produces more equitable outcomes. Before looking at the trends in education outcomes across Latin America, I define here key terms.

3.1 Outcome Definitions

I follow Corrales (1999) and the education development literature in distinguishing between *access* and *quality*. In broad terms access measures how much education students receive and quality measures how *good* that education is. Aggregate success on quantities related to access (enrollment, completion, transition, dropout, and repetition) and outcomes

(test scores) can be measured in a variety of ways. Some outcomes are straightforward and uncontroversial. These are generally those related to quantity of education — enrollment or completion rates, for example. Others are both difficult to measure and highly controversial. Measures of education quality such as test scores fall into this category.

Measures of Access Enrollment at any given level of education acts as a measure of access of education — how much education are students receiving and what barriers exist to getting it? These measures generally exist only for compulsory levels of education and thus provide a sense of how well the government is able to provide this service to those who are eligible to take advantage of it.[2] Obstacles to enrollment include lack of schools and economic conditions. To measure enrollment, I use adjusted net enrollment rates, which measure the number of enrolled students as a percentage of the corresponding population. This takes into account students who have advanced to higher levels of education prior to the normal age for doing so.[3]

Beyond simply knowing whether the appropriate population is enrolled in school, access measures also track student progress throughout the education system. Four such measures are available: repetition, dropout, completion, and transition rates. The names of all four accurately convey what they measure. The repetition rate measures the percentage of students who must repeat a given grade. Repetition numbers should be interpreted with caution because of challenges in its accurate measurement including late enrollment of students, policies of automatic promotion, and transfer of students between grades. Dropout is the percentage of students who were enrolled in one year, but not the following year. Completion rate is a measure of the students enrolled in the final grade of primary, lower secondary, or upper secondary.[4] The transition rate is the percentage of students who move

[2]Changes to eligibility itself — age or citizenship requirements, e.g. — can affect access to education, but are outside the scope of this project.

[3]The adjusted net enrollment rate can exceed 100% due to repetition.

[4]Although individual countries can generate more precise completion statistics, taking into account those who dropout in this final year, these numbers are not available at the world level. As a result, the completion

from one level to the next and can be interpreted as a measure of access at the higher level of education (UNESCO Institute for Statistics 2018).

Measures of Quality Measuring quality of education is a difficult task. There is no universally accepted definition of the standard by which to judge education. There is even a divide in the literature as to whether it is better to measure quality using school inputs such as spending per student or teacher-student ratios (Betts 1996) or outputs such as test scores (Hanushek and Wößmann 2008). Further, even when such a standard is agreed upon, there are not always clear ways to measure it.

Standardized test scores have many flaws and their limitations have been lamented for nearly a century — essentially as long as standardized tests have existed (Buros 1977). Some have argued that testing has negative psychological effects on students (Paris et al. 1991) and others that standardized tests themselves are a tool by which to enforce a social hierarchy (Garrison 2009). A long-recognized problem is that when test scores are linked with incentives or are made highly public or salient, teachers and school administrators can shift focus and resources toward teaching to the test instead of spending time on the prescribed material (Haladyna, Nolen, and Haas 1991; Baker et al. 2010).

Equally, despite the appeal for an "objective" measure of student achievement, standardized tests have been shown to include many kinds of bias and do not adequately measure student abilities (Kohn 2000). Previous studies have suggested that non-instructional factors like family background explain the vast majority of variation in test scores (Robinson and Brandon 1994).[5]

Perhaps the most damaging criticism, from the perspective of this study, is the suggestion that standardized tests do not actually measure any valid concept (Popham 1999). This may

rate should only be used as an upper bound on the estimated completion rate (UNESCO Institute for Statistics 2018).

[5]This is not to say that schools do not matter. Rather, the research suggests that background factors like family education are critical (Rumberger 1983; Aikens and Barbarin 2008; Baker and LeTendre 2005; Buchmann 2000; Marteleto and de Souza 2012).

be due to problems with the assumptions of the test as well as the validity of the questions that it is composed of (Neill and Medina 1989).

Defenders of standardized tests exist, although they tend to receive less attention than the critics. A sizable literature exists suggesting that standardized tests may, in fact, have positive consequences. These may be either unintentional (Cizek 2005) or intentional (Phelps 2005) and include increasing accountability, achievement, motivation, and giving leaders information needed to make decisions. Additionally, more recent research has revisited criticisms about the validity of standardized tests and found reasons to be hopeful that they can be valid (Kuncel and Hezlett 2010).

Proposed alternatives to standardized tests include "performance assessments" and "learning portfolios" (Kohn 2000). Both are designed to give greater weight to classroom-specific learning, allow more detailed feedback than a single letter grade, and assess learning in a more holistic way. The strengths of these alternatives come in their micro-level approach but these alternatives also suffer from the same shortcomings of standardized tests (Phelps 2017) — moving away from multiple-choice or essay-based assessment is not a "magic bullet" to overcome bias or concerns about validity.

Beyond test scores, there are other possible output measures of education quality, but they are also flawed. Since one of the goals of education is instrumental (i.e. for students to gain remunerative skills), labor force statistics may provide a measure of education quality. However, both employment levels and wages are determined by more than the supply of (skilled) labor. Global economic events, the structure of the local economy, mobility, and external shocks all play an immediate role in these outcomes. Modeling the effect of schooling on labor outcomes (typically earnings) presents a variety of challenges (Harmon, Oosterbeek, and Walker 2003). Although the economics literature has made great strides in overcoming these obstacles, these studies look at the effect that education quality has on earnings instead of the inverse of using earnings to measure education quality (Hanushek and Wößmann 2007; Hanushek and Wößmann 2008). Further, in many situations the connection between

education and wages is not direct — the signaling effect of certain types or levels plays an essential role in earnings (Spence 1973; Layard and Psacharopoulos 1974). Thus, the classic "Mincerian" models in which the individual is the unit of analysis are not appropriate in this situation (Mincer 1958; Mincer 1974).

The result of these considerations is that, despite their flaws, standardized tests provide the only viable option for international comparisons of education quality.

Measures of Equity Equity in education exists only in relation to access and quality — it is possible to increase either in equitable or inequitable ways, but it is impossible to talk about equity in and of itself. It is worth considering both equality of opportunity (whether all students have equal access to educational resources of similar quality) and outcome (whether all students learn the same amount).[6] On the latter question, it is obvious that not all individuals will learn the same amount, as cognitive skills and motivation vary by student. The question is whether or not groups learn the same in the aggregate. This study will only consider gender equity due to data limitations. Geographic location (urban versus rural), race, and family income are other common groups across which educational equity is measured.

The gender gap in education is a problem that exists in nearly every education system. In less economically developed countries in Latin America (and elsewhere), the traditional gender gap persists in which boys receive more education and tend to perform better than girls, although more recent studies suggest that this gap is narrowing (Fraile and Gomez 2015; Nopo 2012; Hausmann 2009).[7] This is due partly to young girls leaving the school system after becoming pregnant (Rumberger 1983; Hindin and Fatusi 2009; Grant and Hallman

[6]As noted in Chapter 1, "equity" is often defined as equality of opportunity and "equality" as equality of outcome and that the former is closely tied to ideas of justice, fairness, and inclusion (Simon, Malgorzata, and Beatriz 2007). For the purposes of this study, "equity enhancement" refers to improvements on *both* of these areas.

[7]In contrast, girls tend to excel while boys struggle in many wealthier countries (Klesment and Van Bavel 2017; DiPrete and Buchmann 2013; Buchmann, DiPrete, and McDaniel 2008).

2008).[8]

Equity can be measured as the difference in either access or quality between either male and female students. The difference in test scores between boys and girls, for example, provides one measure of gender equity. Reducing these gaps constitutes equity enhancement. It is important to note the difference between closing the gap by raising the lower performing group and allowing the higher performing group to decline. Equity of *high quality* education is a desirable outcome; equity of low quality education is not.

3.2 Patterns of Progress

Education in Latin America has received substantial attention by the international community in recent years. Much of this literature has been focused on the challenges that remain for education to rise to needed levels (Bellei et al. 2013; PREAL Advisory Board 2005; The World Bank 2018). Yet there is cause to celebrate in the improvements in education over the past two decades. On measures of access most countries have made significant improvements. Quality remains a persistent issue, although some countries have made positive strides on these metrics.

Recent research also suggests that the gender gap has narrowed in many developing countries, largely due to a focus from the MDGs and programs designed to address this issue (Grant and Behrman 2010). The trends presented here confirm this, although there remain significant gaps.

Despite these gains and the positive trends presented here, Latin American countries continue to lag behind OECD countries as well as other countries at similar levels of development. Chile and Mexico, members of the OECD, perform better than other Latin American countries in the international PISA test but are still the worst performers in the OECD (Bos et al. 2016). In comparison to East Asian countries, which started at simi-

[8]Some schools ban pregnant students and new mothers from attending classes, though international treaties and specific legislation in some countries has sought to address this. The Ley General de Educación in Chile, for example, provides specific protections for teenage mothers (Art. 11 *LGE* 2009), but these protections are not universal (UNESCO 2014).

lar levels of development fifty years ago, Latin America performs significantly worse on all education metrics (Hanushek and Wößmann 2012).

As in Chapter 2, the graphs are presented with groups into "Southern Cone +," "Caribbean," "Central America," and "Bolivarian +" categories.

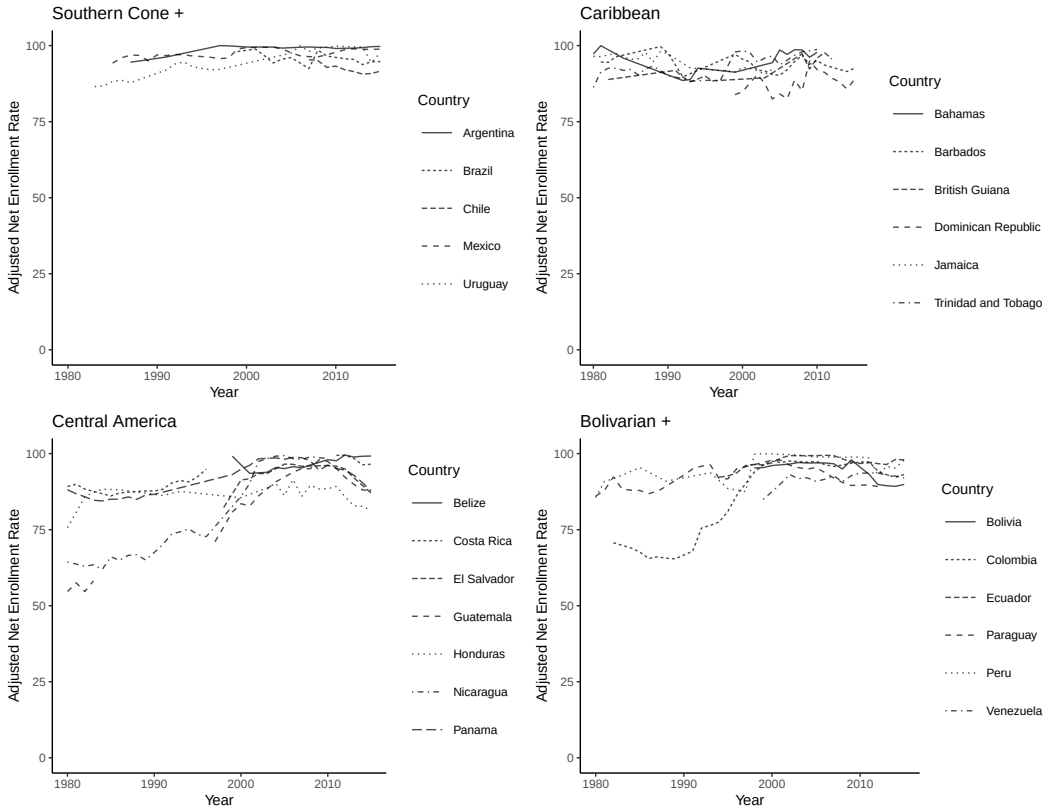

Figure 3.1: Adjusted net enrollment rate — Primary

Enrollment rates Figures 3.1 and 3.2 show changes in the adjusted net enrollment rate (ANER) of all countries in the sample for primary and secondary education, respectively. The first clear trend is that primary education has become nearly universal. Southern Cone countries reached this marker much earlier than others. Central American countries started at the lowest point and caught up only by 2018, but there are some signs that primary education enrollment has dropped a little in these countries over the past few years. The Bolivarian countries sit somewhere in between the other two groups, starting lower than the

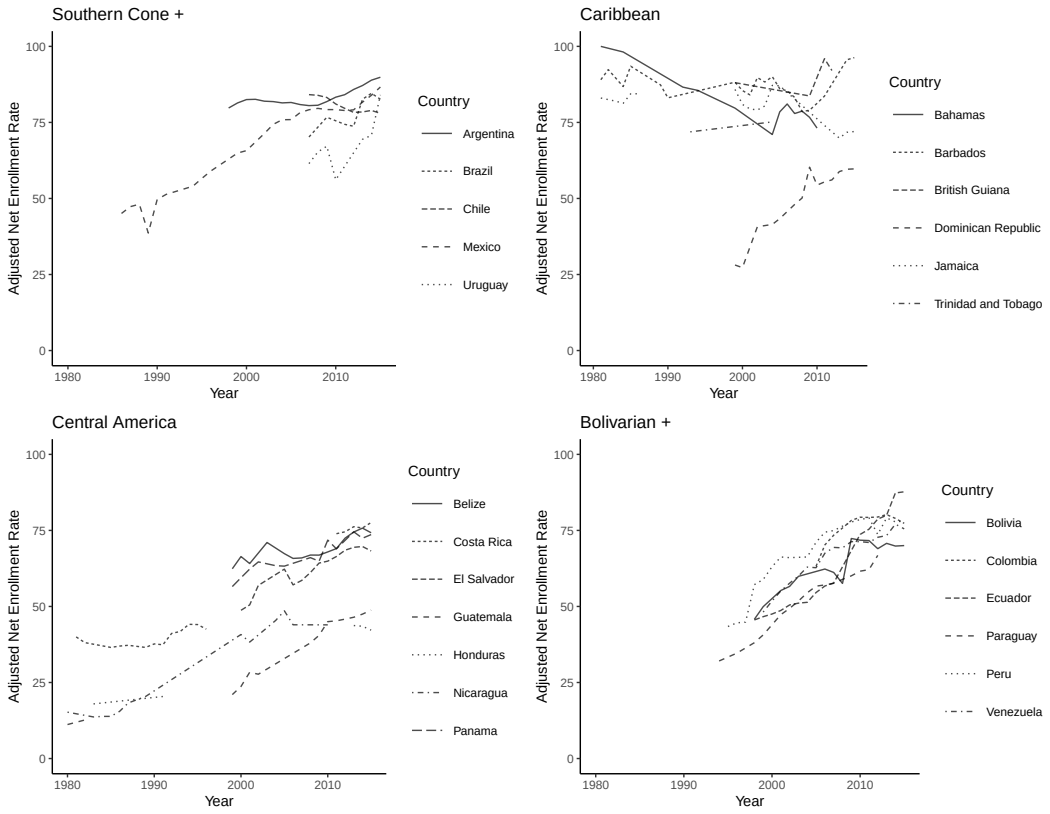

Figure 3.2: Adjusted net enrollment rate — Secondary

Southern Cone and higher than Central America, but growing more quickly than the latter.

At the secondary level the trends are positive overall. Southern Cone countries perform best in secondary enrollment today despite starting at levels similar to those in Bolivarian countries and only a little higher than Central America. Both Central American and Bolivarian countries have shown enormous growth in secondary enrollment rates over the period for which we have data, but are still far from achieving universal enrollment. The Caribbean stands out for the Bahamas, where secondary enrollment has fallen significantly over the past several decades.[9]

Completion and transition rates Figures 3.3 and 3.4 look at the completion rates for primary and lower secondary, respectively, and Figure 3.5 shows the effective transition rate from

[9]It is possible that this is a false trend, with overly optimistic measurement in the 1980s leading to false conclusions.

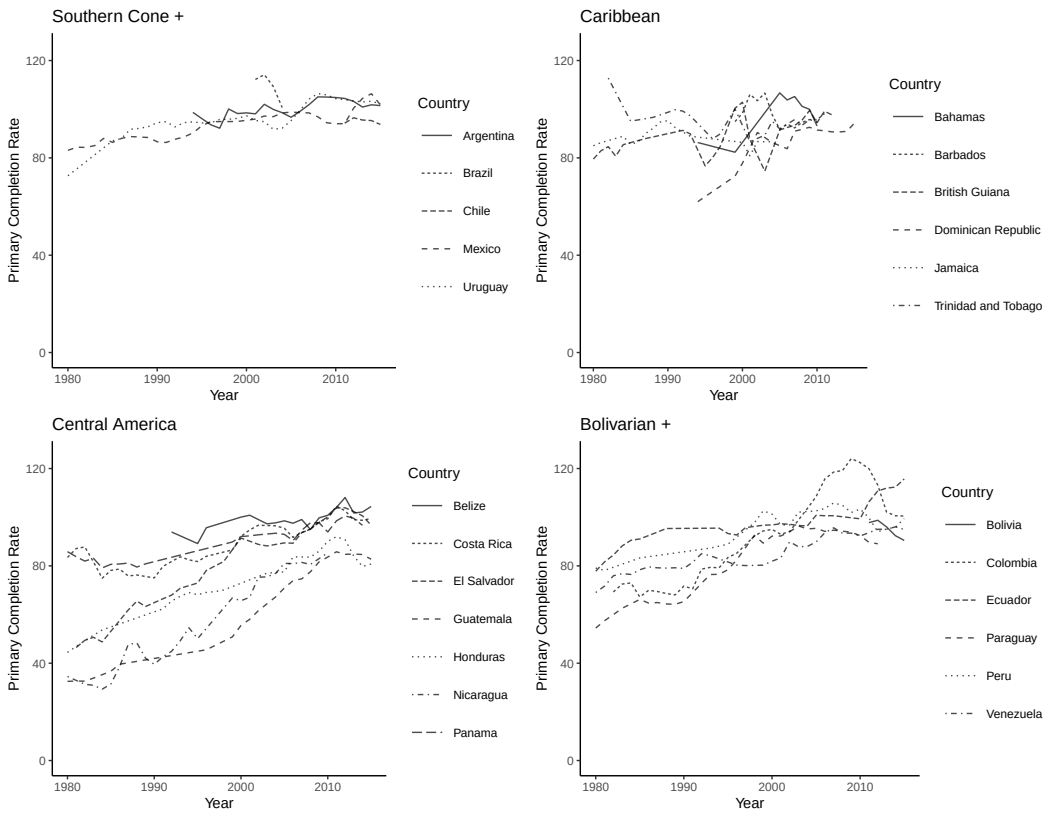

Figure 3.3: Primary completion rate

primary to secondary education. Completion and transition rates exhibit a similar geographic pattern to enrollment rates: the Southern Cone starts higher than the other regions and ends with very high scores; Central America starts at the lowest level and makes enormous strides, but still performs below the levels of the Southern Cone countries; the Bolivarian and Caribbean countries fall somewhere between these two extremes. Similarly, the completion rates for primary education are much higher than for secondary.[10] A similar trend can be observed with the transition rates between primary and lower secondary education.

Repetition rates Figure 3.6 shows repetition levels across the region. Across all countries in Latin America there are similar trends in repetition rates. Repetition rates have held fairly

[10]This is unsurprising given that the opportunity costs of secondary education are greater than primary for families in poverty and primary education is always mandatory, while at least a portion of secondary is not.

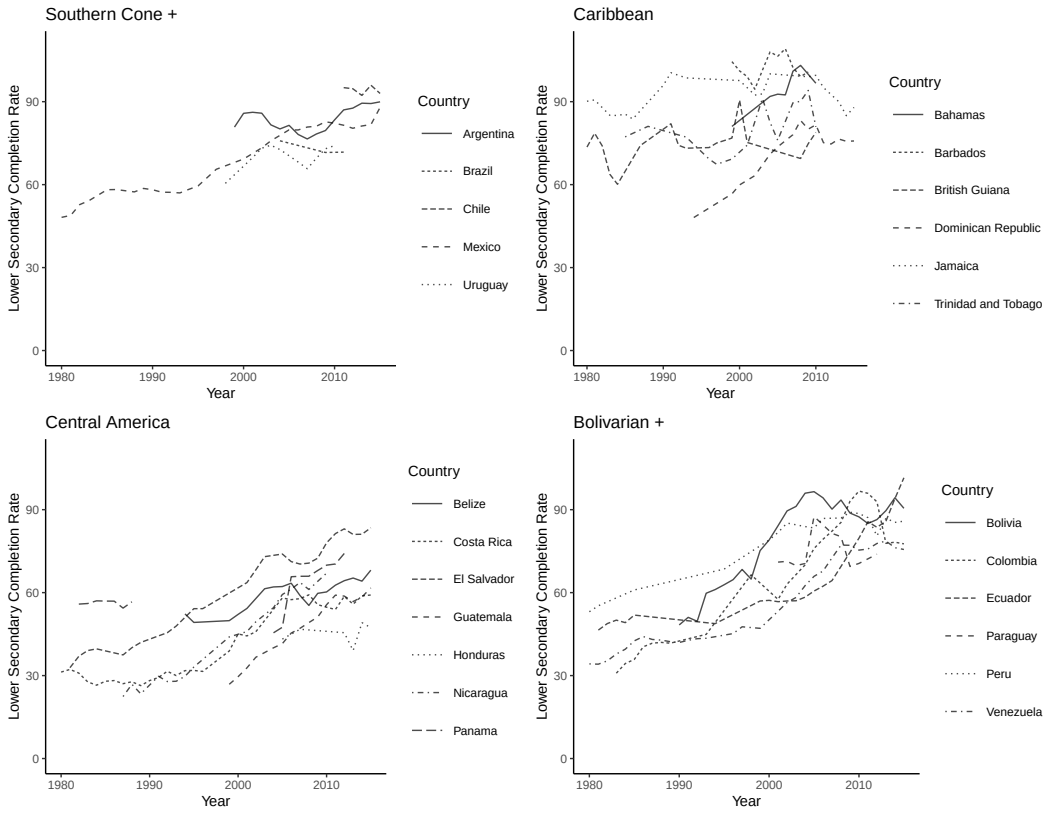

Figure 3.4: Lower secondary completion rate

constant, with only slight downward movement. These findings should not be surprising considering the nature of repetition. Unlike in the United States where "social promotion" often advances students who have not reached academic expectations, it is much more acceptable in Latin America to hold students back if they fail.[11] Although social promotion has not taken hold in the region, the rate of repetition has decreased dramatically from historical levels. In Chile, for example, at the start of the Eduardo Frei administration (1965-1970), enrollment in first grade was at 170% of the total first grade-aged population, suggesting extraordinarily high levels of repetition (Farrell 1986, p. 34).[12] These trends exceed the scope

[11]There are no statistics on the frequency of social promotion (Thompson and Cunningham 2000). The practice came under great scrutiny in the late 1990s and the start of the 2000s and was one target of the No Child Left Behind Act (Jimerson et al. 2006). Still, there is little question that the practice persists to some degree in the United States.

[12]It is impossible to calculate the exact level of repetition from this number as students may be held back more than once.

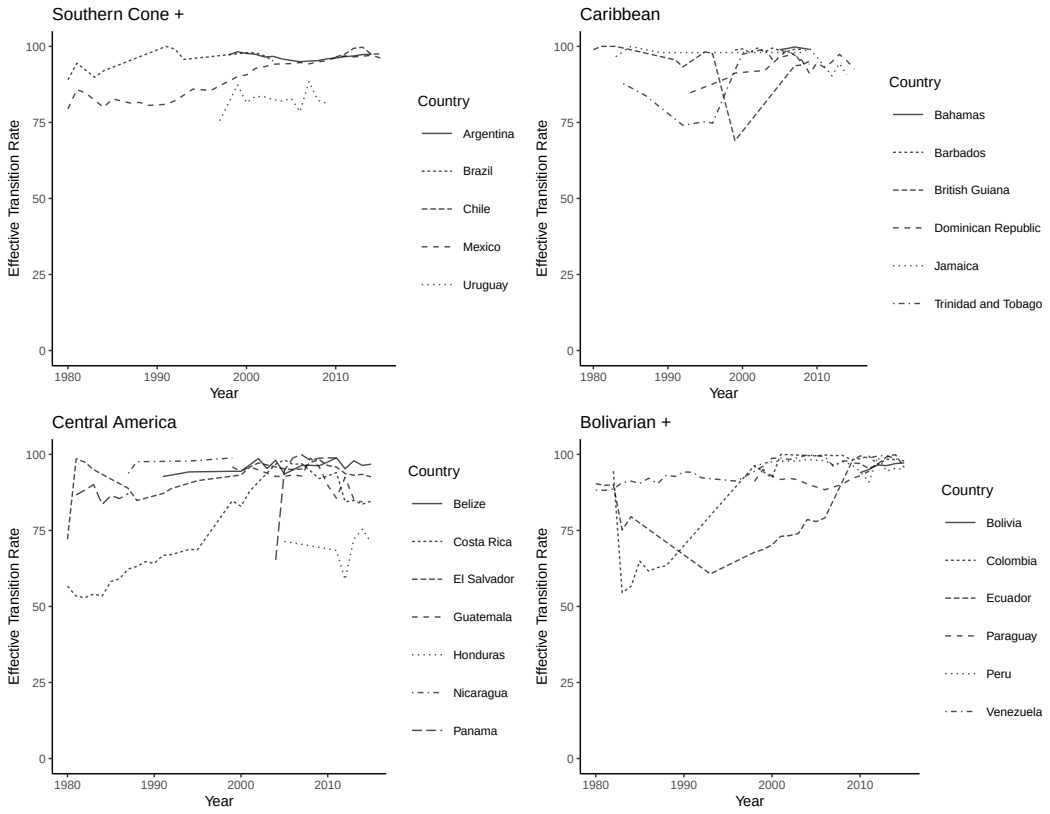

Figure 3.5: Effective transition rate from primary to secondary levels of education

of this project but demonstrate the progress in education since the mid-twentieth century.

Note also that repetition is most likely at the lowest grades in primary and secondary. Higher grades (not shown here) follow the same trends presented here with lower percentages across the board. After being held back for a year students will either do better the following year and move on to the next grade or will drop out. Students who are held back are much more likely to drop out (Griffin and Heidorn 1996), explaining the higher repetition rates at lower grades.

Dropout rates Figures 3.8 and 3.9 show the trends in dropout rates in primary and lower secondary education, respectively. Despite more or less steady rates of repetition and the greater probability of dropping out if held back than if promoted, Latin American schools have made tremendous strides in reducing dropout rates at both the primary and secondary

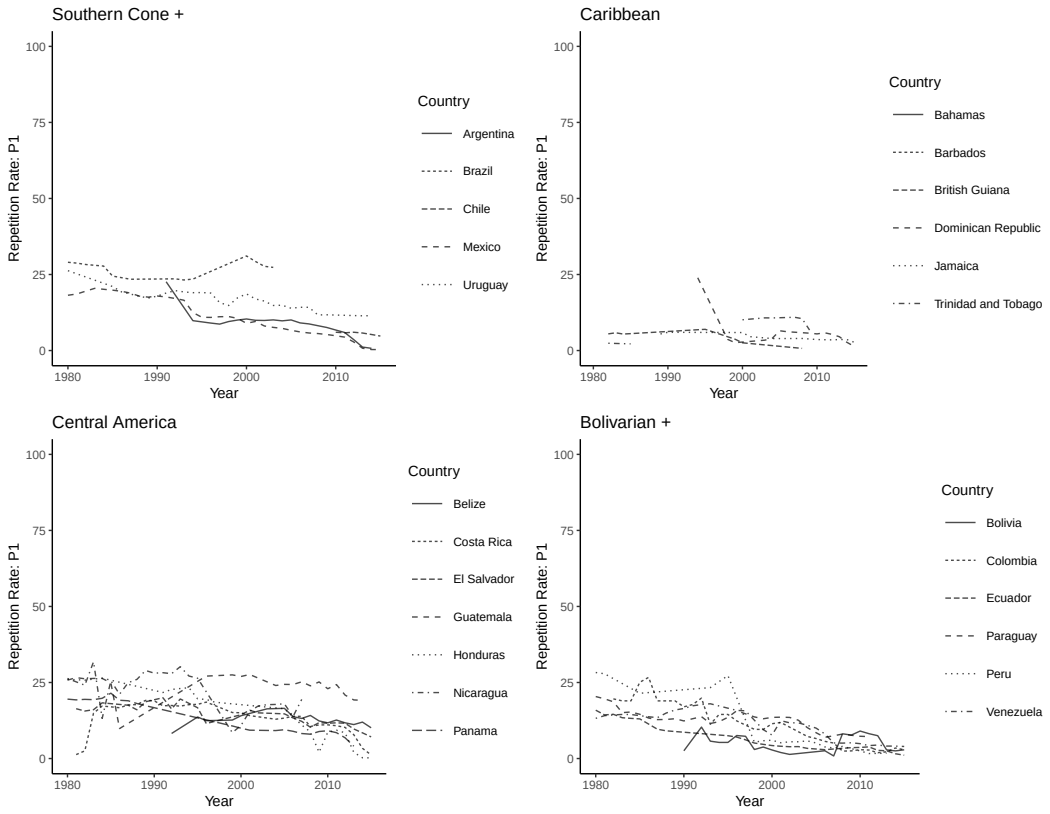

Figure 3.6: Repetition Rates — Primary Grade 1

levels. These rates are much more fickle than other education metrics, however, and tend to reflect the immediate economic conditions of the country. Economic recession creates immediate demands on families, particularly poor families, who can no longer accept the opportunity costs of sending children to school and need, instead, the immediate income they can earn if they leave school (Olaniyan and Okemakinde 2008; King and Hill 1993).

Test scores Finally, Figures 3.10 and 3.11 show the trends in test scores in primary and secondary education. These graphs show the average test scores for all students in a given country-year. The data is based on the test score database created by Altinok, Diebolt, and De Meulemeester (2013). Even with their extended database, coverage is extremely limited. Most countries have only a single observation at the primary level and at the secondary level there are only a handful of countries with a time series available. Within this limitation, the

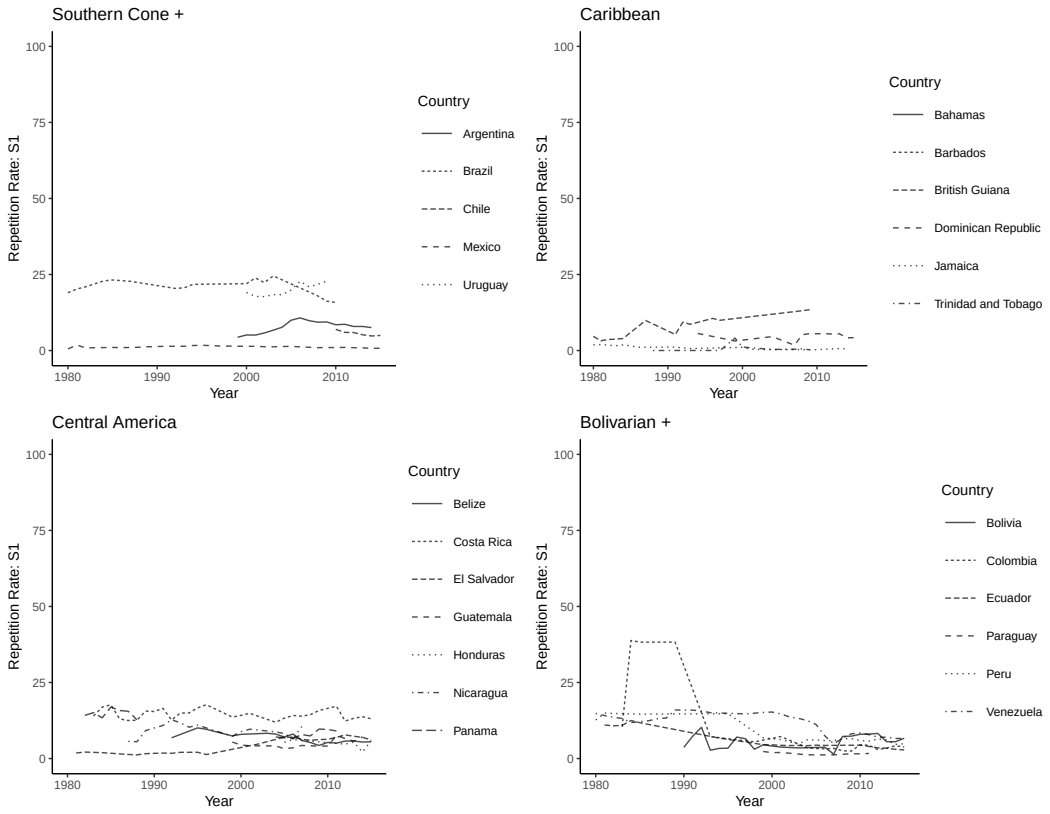

Figure 3.7: Repetition Rates — Secondary Grade 1

available data suggests that test scores are rising in Latin America.

It is also informative to look at these trends at a country level. Most of the series move in parallel and there is no clear correlation between executive ideology and changes in education outcomes. Figure 3.12 shows all the outcome series for Costa Rica, a representative case. Shaded gray bars at the top and bottom of the plot correspond to administrations, with darker shading indicating more left governments. Dashed vertical lines have been added to aid in viewing the blocks of years. In some series there is a hint that an inflection point in the series trajectory occurs a couple of years into an administration, but most of the lines appear to move independently of changes in executive ideology. This hints at the findings below in which partisan ideology does not predict education outcomes.

Similarly, we can look at test score patterns by country. Figure 3.13 shows over time performance on test scores in Mexico and Argentina. These two countries are representative

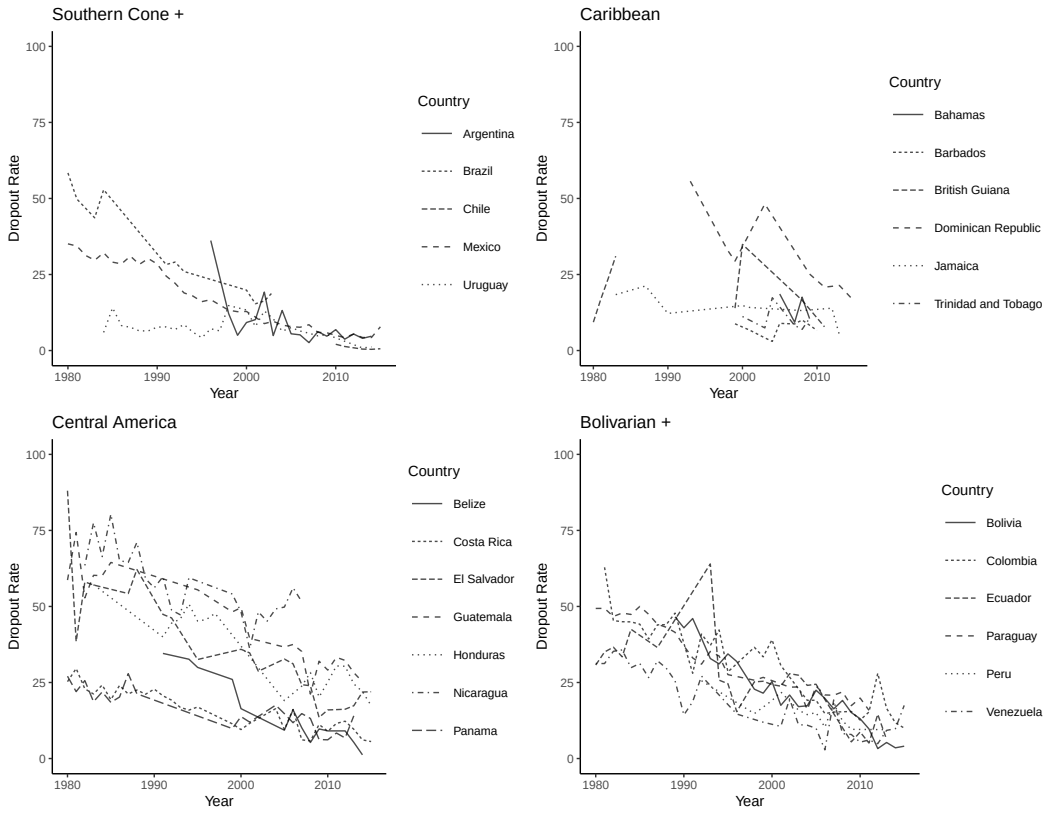

Figure 3.8: Dropout Rates — Primary

of the overall trends (as much as can be determined from this limited data). We observe a few clear patterns. First, there is a clear positive trend in all countries, with an increasing percentage of students meeting the basic standards (series starting with "adj1"). There does not appear to be any clear connection between party ideology and these improvements, however.

Second, there are two divergent trends in the relative performance by gender and by location. The first group of countries, of which Mexico is representative, has made strides to close the gender gap as well as the divide between urban and rural students. The second group, of which Argentina is representative, has seen these gaps persist or even increase. The latter trend is worrying, particularly in the case of Argentina. The divide has not only increased to an alarming level, but it is driven both by increased performance in urban students and *decreased* performance in rural students.

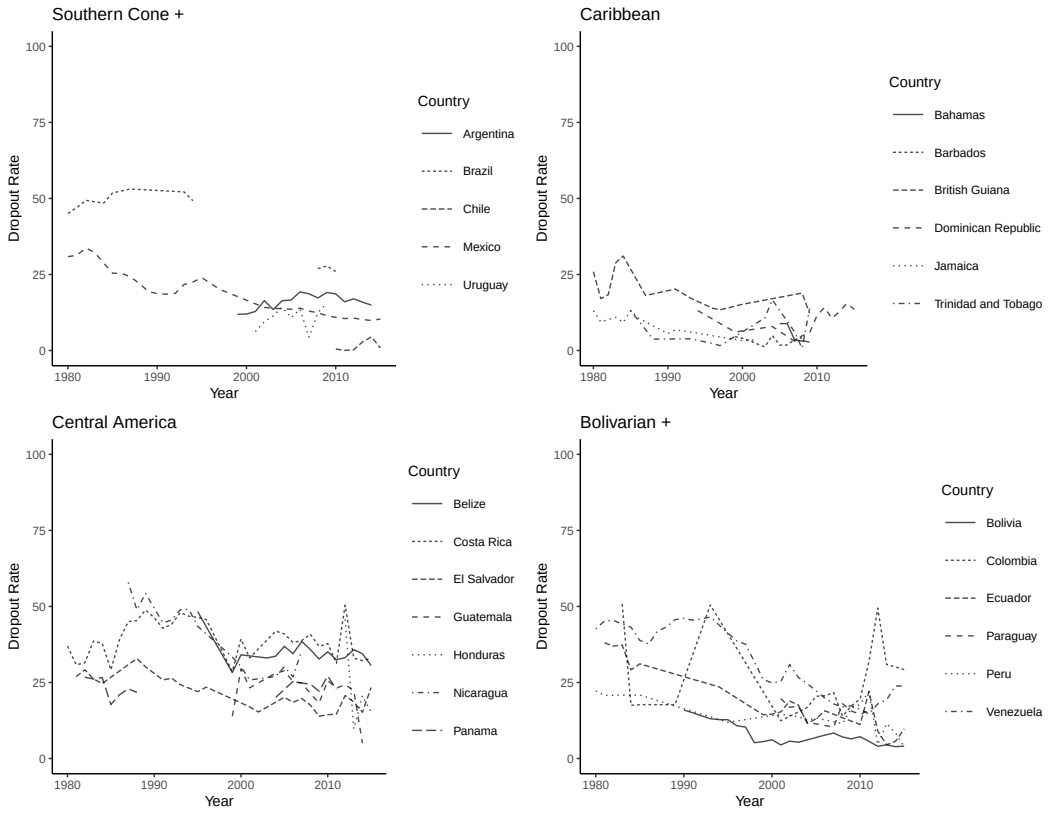

Figure 3.9: Dropout Rates — Secondary

The Role of CCTs in These Trends CCTs became popular in Latin America after two large pilots (in Brazil and Mexico) showed positive results. Though there is great variation in the requirements attached to CCT programs, all follow a similar model: families who qualify (usually based on income and residence) receive a modest monthly cash stipend as long as they fulfill pre-determined requirements (usually related to health services and school attendance). Are these programs responsible, then, for the trends described above?

Since these programs are tied to school attendance, it is unsurprising that they have shown positive results with increasing access to education (Bonal, Tarabini, and Rambla 2012). However, the evidence is mixed (or even negative) as to whether these programs actually improve any other metrics related to education (Schwartzman 2005). In fact, CCTs show no evidence of increased performance in student learning, which is unsurprising since that is not an aim of these programs (Reimers, Da Silva, and Trevino 2006). As a succinct

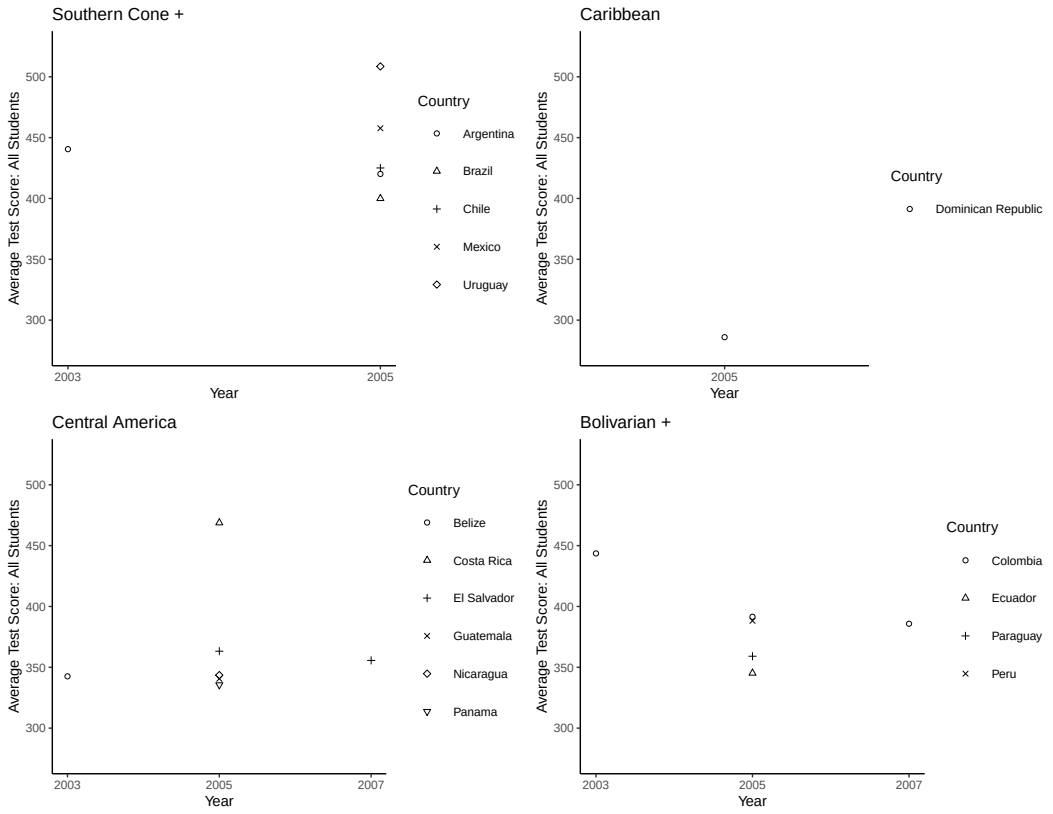

Figure 3.10: Mean Test Scores — Primary

summary of the impact that CCTs have on education,

> conditional cash transfers are less impressive in terms of their educational impact than they are as direct poverty alleviation transfers. There is evidence of some positive impact on enrolment, but it is not clear that transfers are efficient, particularly at the primary school level, because the transfer is given to many families who would have sent their children to school without the transfer…The evidence is more favourable regarding attendance at school. Given that opportunity to learn is influenced by time spent learning, this is a positive result. If the schools that students go to were such that children could actually receive quality instruction once they attend, it is clear that the transfers would help students learn. This is a critical assumption of these programmes…There is no evidence that students receiving cash transfers perform at different levels in tests of student achievement than their counterparts not receiving the transfers. This should be a cause for concern, if the transfers are seen as a strategy to improve the education levels of the children of the poor (Reimers, Da Silva, and Trevino 2006, pp. 45–46).

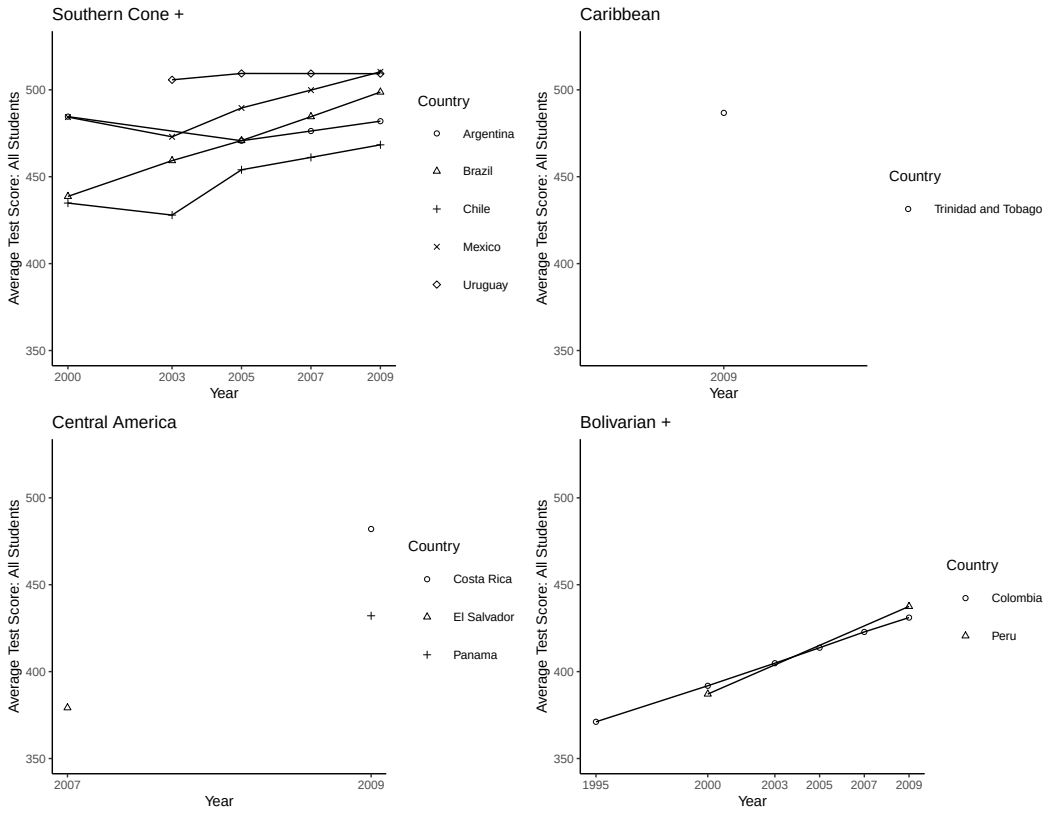

Figure 3.11: Mean Test Scores — Secondary

Given this assessment, these programs cannot be credited with producing the wide range of positive improvements to education outcomes. With respect to improved performance on access, the mixed ideological roots of CCTs point more toward convergence than divergence. In Mexico, the *Progresa* (later *Oportunidades*) program was started under the center-right PRI government. In contrast, the *Bolsa Escola* in Brazil was first piloted under the the PT's leftist governor in the Distrito Federal (D.F.), then expanded nationally with the *Bolsa Escola Federal* under the center-right PSDB government of Fernando Henrique Cardoso. That program mutated (and dramatically expanded) under the subsequent leftist PT governments. Thus, it is still worth considering whether partisan ideology can account for the trends in education outcomes across the region.

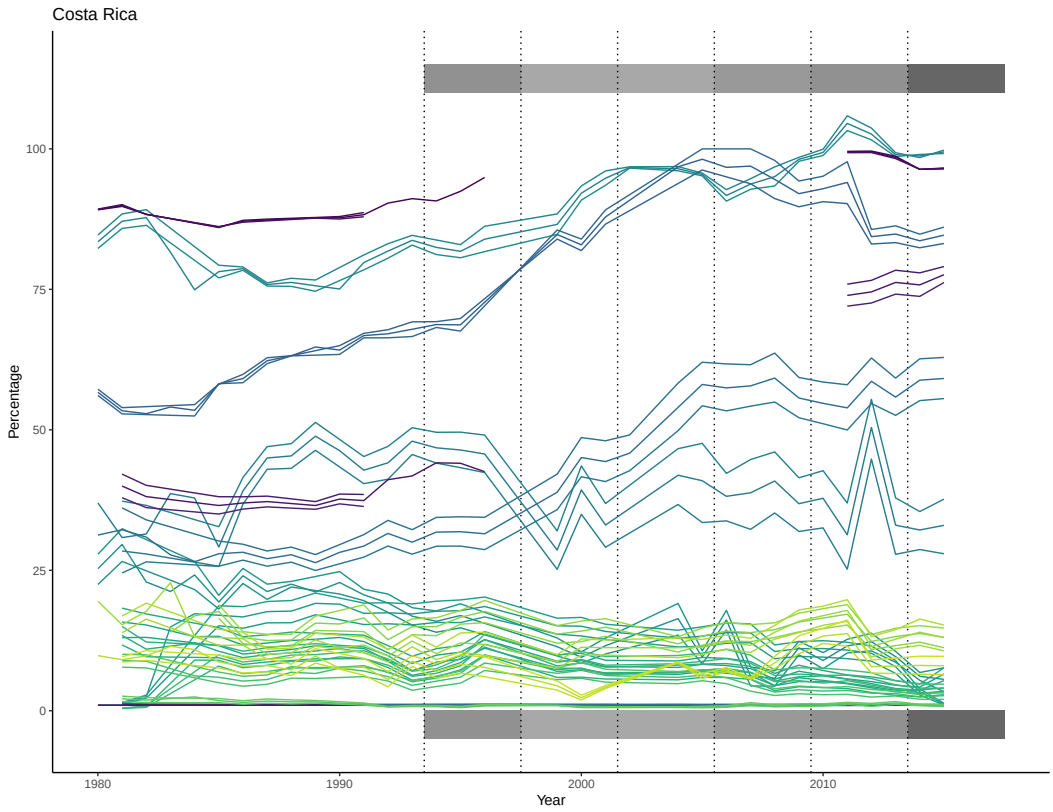

Figure 3.12: All outcome series. Shaded bars indicate party ideology for the administration during that period. Darker colors indicate more left-leaning governments.

3.3 Empirical Analysis

This section examines whether the trends noted above have any relationship with partisan ideology. Despite expectations that differences in beliefs about inequality should lead parties to different educational strategies, I find little relationship between partisan ideology and education outputs. To address concerns that the results are due to model specification errors, I adopt several different modeling approaches. That all of them show similar results should be interpreted as strong evidence of a lack of a relationship between partisan ideology and education outcomes. Alternative specification models are presented in Appendix D.

3.3.1 Data

The World Bank provides high-quality data on a wide range of outcomes related to access. I collect data from the World Bank on completion, transition, repetition, and dropout rates.

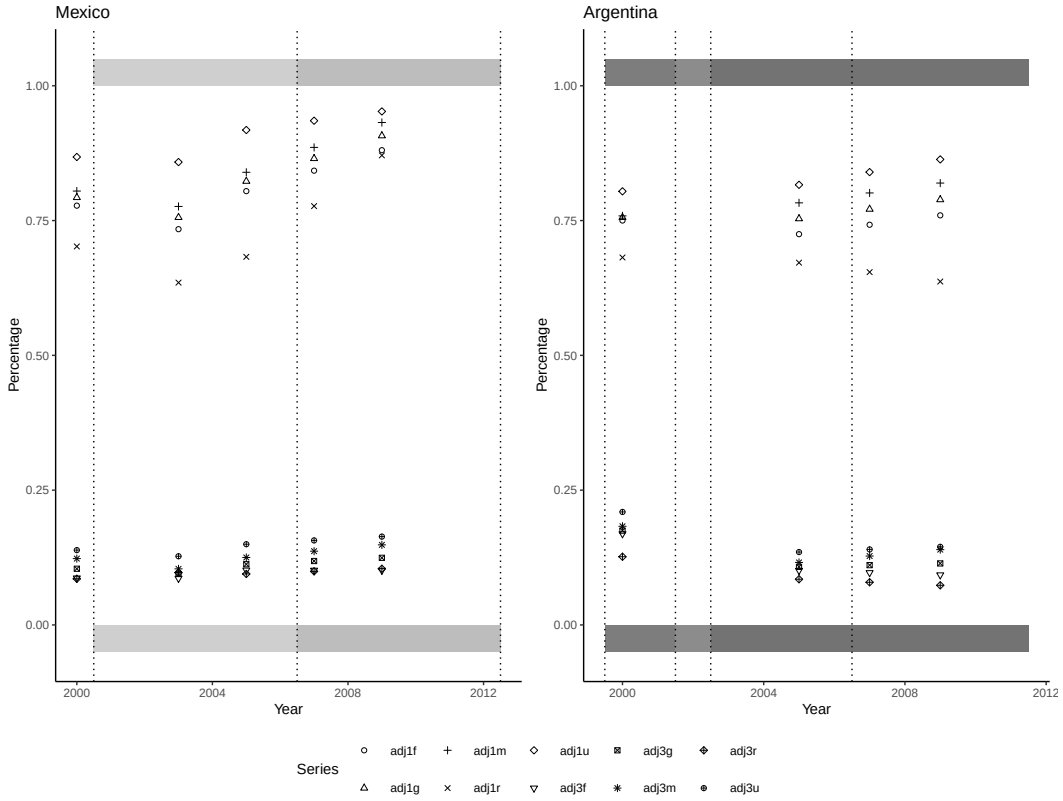

Figure 3.13: Test scores over time. "Adj" indicates adjusted scores; 1 or 3 indicates the level of proficiency; "m," "f," "r," "u," and "g" indicate male, female, rural, urban, and global, respectively.

Data on education quality is more limited in its availability. In Latin America, only a subset of countries participate in the most widely used Program for International Student Assessment (PISA) test.

Altinok, Diebolt, and De Meulemeester (2013) have worked to overcome this limitation by linking test scores from different standardized test regimes into a single metric. They have expanded their coverage and improved the linking mechanism in a recent update (Altinok, Angrist, and Patrinos 2018). However, they have not yet made these data publicly available. Until these authors make this data available, I have to fall back on a second strategy to overcome a lower level of information. I do this through the application of Bayesian statistical inference. Unlike frequentist models in which inference is drawn based on a set of well-

known assumptions and under repeated sampling, Bayesian inference is drawn purely from the available data. As a result, Bayesian methods can produce unbiased results even in the presence of very small n (Jackman 2009). See Appendix E for a full discussion on the Bayesian approach employed here. While this approach allows analytical leverage on this limited data, the results on test scores should still be viewed only as preliminary given the very small subset of countries and years used for those tests.

Dependent Variables

The dependent variables for this analysis of access — enrollment rates, completion rates, repetition rates, dropout rates — follow the descriptions provided above. These variables are measured as percentages of the relevant population. All of them are bounded at 0 on the lower end. ANER can exceed 100% due to repetition, but both repetition and dropout rates are bounded at 100 on the upper end.

The dependent variables for education quality are PISA test scores. Scores are reported in two forms. In the first, national averages are reported for each of three domains: mathematics, reading, and science. There is no theoretical maximum or minimum score on the PISA tests, but the reported scores are scaled to have a mean of 500 and a standard deviation of 100 for each of the three domains. As a result, approximately 2/3 of students fall between 400 and 600 (OECD 2017). In the second form, the percentage of students in each country falling at or above different percentiles is reported. I focus on the former presentation in this analysis, but offer a brief analysis using the latter in Appendix D.3.

Explanatory Variables

As in the analysis for education outputs, this chapter also uses partisan ideology as the primary explanatory variable. I continue to use the ideology measure developed by Baker and Greene (2011) as the benchmark and measures from Rosas (2005) as a robustness check.[13]

[13]I do not use the CHS data here because its categorical classification of parties does not lend itself to how I model time in the outcomes analysis. See section 3.3.2 for more details.

The outcomes models also include political, economic, and demographic covariates. First, I include polyarchy, the V-Dem measure of democracy (Coppedge et al. 2018), because previous work has shown that democracies and authoritarian regimes have different education preferences (Brown 1999; Brown and Hunter 2004). Recent work demonstrates that authoritarian regimes also share an interest in increasing supply of education (Paglayan 2018), so I do not anticipate that the polyarchy variable will be significant in any of the models. I also control for the percentage of the lower house that is controlled by the same party as the executive, because having a majority control of the legislature can facilitate passing policy. As a final political covariate I also include the length of the executive's term. The longer a leader is in office, the more opportunities she has to enact policy changes and see results from them.

Education exhibits a unique characteristic that makes measurement of its outcomes challenging: results depend not only on the inputs by the state, but also on the active decisions by the subjects of the policy — the students and their families. Individual decisions about attending school, for example, depend not only on the supply of school, but also on a family-level cost-benefit analysis weighing opportunity costs of more education against future expected earnings (Psacharopoulos 1977). These individual decisions are in turn affected by macroeconomic conditions (Torche and Ribeiro 2010). I include GDP per capita as a crude control for the effect of the economy on individual decisions about education. I also control for economic growth.

A deep literature on family traits demonstrates the crucial role that parental education plays on pursuing education with a strong bias toward more education by more highly education parents (Marteleto and de Souza 2012; Buchmann 2000; Baker and LeTendre 2005). My models include a control for average levels of education in the population. Additional demographic covariates include the degree of urbanization in a country because of the efficiencies associated with concentrations of students and the percentage of the population at the appropriate age for primary or secondary education.

3.3.2 Modeling Time

Assigning responsibility for changes in performance in education presents methodological challenges because of issues related to the passage of time. Specifically, a delay in measurement of outcomes and a delay between the passage of a policy and its implementation makes it more difficult to assign responsibility for a change in outcome to a specific change in policy. This makes education different from other policy areas in at least two ways.

First, education policies often have a long lag between implementation and effect. Consider a change in curriculum that requires one additional hour of math instruction per week, a change the is relatively easy to implement: a ministry of education (or other governing body) need only design and publicize the change. Yet even in this simple example, the delay between change and outcome will be lengthy. The change must be propagated across all schools, the teachers and principals must understand the changes, and the teachers must then adapt their lessons to match the change. As a practical matter, if this change is announced in year t, it is unlikely to be fully implemented until at least time $t + 1$. However, the effects of this change will not be apparent immediately. The earliest point at which it is possible to detect the effects comes at the first point of evaluation, which will occur either at or very near to $t + 2$. Other changes are likely to take even more time. Improvements to teacher training, for example, will take many years to implement and the effect of such a change will be distributed over an even longer period.

Second, education is both cumulative and sequential. A student's ability to perform math in high school, for example, will depend not only on the quality of instruction in high school, but also the quality of instruction in elementary school. Thus, evaluations of students also depend on their educational history.

In true panel data, the same students would be evaluated at different ages and the researcher could overcome these difficulties to assign values to the different stages of education (i.e. estimate the effectiveness of specific teachers or changes in policy). However, this is not the case for either the access or quality metrics used here. Standardized tests, for ex-

ample, evaluate a different group of students each time they are administered. This means that while they offer a snapshot in time of student learning at the aggregate level, they are not appropriate for estimating performance of teachers or schools or growth of individual students.

There is no consensus about the length of this delay, nor is there a methodological consensus on how to deal with it. Further, there is little in theory to provide a strong prior belief about the delay. I employ two strategies for modeling time — one for measures of access and another for measures of quality.[14]

In order to model time in the access analyses, I measure the change in outcomes between the start and end of an executive term.[15] This follows the recommendations from Garritzmann and Seng (2016) to use the administration-term as the unit of analysis, which are appropriate in this situation where there is greater delay in the observed outcomes. The average administration length in the period of study is 4.6 years. This period is sufficient for policies that affect these outcomes to take effect and be measured. Additionally, measuring the change in these outcomes incorporates the cumulative and sequential aspects of education outcomes. Since the unit of analysis is the executive term, the dependent variable is measured as the difference between the start and end of the term. By measuring the change, these models assign responsibility to the party in power. This unit of analysis also means that the explanatory variable of greatest interest takes on only a single value (i.e. I assume that an executive's ideology score cannot change over the course of a term). I take the average value for other economic and demographic covariates.

In order to model time in the quality analyses, I measure variables as moving means over extended periods of time. This incorporates information from the entire educational background of students at the time of measurement on the dependent variable. The baseline

[14]The analysis of equity follows the corresponding strategy for equity of access and equity of quality.

[15]Note that I define "term" as the period from when an elected leader is first sworn into office until she leaves office. Thus, if a constitution stipulates a presidential election every four years but a leader is reelected (and serves the full two periods), the "term" will be eight years.

window in the moving means is 15 years. Since the PISA test is administered at age 15, a 15 year period covers the entirety of the students' educational experience. It incorporates information about the system in years prior to their entrance in kindergarten and captures the intuition that education policy in the years leading up to enrollment in primary or pre-primary education will have an effect on the instruction received.[16]

3.3.3 Interpolation & Sparse Data

As in the analysis of education spending, I interpolate missing values for the explanatory variables (see section 2.3.3). Doing so increases the available data. Even after interpolating, however, there remain an issues of data availability for the quality measures. There are simply too few observations on the dependent variable to perform a traditional frequentist statistical analysis. As noted above, I address this shortcoming by using a Bayesian approach for the education quality models. This allows me to draw valid statistical conclusions. Nevertheless, I present these results as preliminary evidence only because of the small sample of countries from which they are drawn.

3.4 Results & Discussion

3.4.1 Access

Table 3.1 shows the results using the five measures of educational access at the primary level as the dependent variables. Recall that the unit of observation is the executive term. The dependent variables, then, are measures of change in the outcome of interest between the start and end of the term. In all five models, ideology is not a significant predictor of the outcome. Additionally, note that both the F-statistics and R^2 values suggest that the models as a whole do not fit the data well. Alternative specifications (both those presented in Appendix D.3 and others not reported here) result in the same conclusions: ideology cannot predict outcomes.

[16]Below I present the results from models that use a 15 year moving mean. However, I also run all the same models using 5 and 10 year moving means. The results across all three specifications are substantively similar and are presented in Appendix D.3.

	ANER	Completion	Transition	Dropout	Repetition
Ideology	0.177	−0.388	0.417	−0.084	−0.170
	(1.267)	(−1.337)	(1.872)	(−0.296)	(−1.264)
Polyarchy	−18.902	−17.101	−24.180	64.691	15.888
	(−0.856)	(−0.447)	(−0.882)	(1.752)	(0.905)
GDP per capita	−3.056	−0.075	41.713**	−36.199	−2.496
	(−0.303)	(−0.005)	(3.358)	(−1.937)	(−0.280)
Urbanization	−20.204	69.914	190.731	−385.350**	19.102
	(−0.331)	(0.634)	(2.065)	(−3.106)	(0.334)
Average education	14.256	−5.957	−51.739**	14.276	−4.462
	(1.516)	(−0.343)	(−3.283)	(0.754)	(−0.523)
Growth	9.212	34.261	−19.739	−11.025	5.184
	(0.726)	(1.474)	(−1.234)	(−0.407)	(0.472)
Lower house share	−3.995	23.379*	−10.770	−1.833	0.714
	(−0.826)	(2.607)	(−1.612)	(−0.214)	(0.175)
Term length	−0.169	−0.161	1.080	−0.332	−0.272
	(−0.415)	(−0.193)	(1.895)	(−0.304)	(−0.714)
Primary-aged population	0.000	0.000	0.000	0.000	0.000
	(0.228)	(0.510)	(0.420)	(1.427)	(0.236)
Secondary-aged population					
Time Controls	✓	✓	✓	✓	✓
Country dummies	✓	✓	✓	✓	✓
Observations	52	45	42	52	53
R^2	0.62	0.65	0.83	0.65	0.45
F Statistic	1.59	1.55	2.89*	1.64	0.75

Note: *p<0.05; **P<0.01; ***p<0.001

Table 3.1: Primary level access outcomes analysis using Baker-Greene measure of ideology. T-statistics listed in parentheses below coefficient estimates.

Table 3.2 shows the results of the four measures of education access at the secondary level.[17] Again, ideology is not a significant predictor on any of these outcomes. Unlike the primary level models, however, the F-statistics on the ANER and completion models suggest that the overall model is doing a decent job of fitting the data and the R^2 values show that it explains a significant proportion of the variation. This is the result of term length acting as a strong predictor for the outcomes, though any explanation of why term length matters in these models and not others would be pure speculation.

3.4.2 Quality

As noted above, these results should be treated as only preliminary and at best suggestive evidence because data is drawn from only the handful of countries that participate in PISA testing. The models show that the right produces slightly better test outcomes than the left. Figure 3.14 shows the results from models with math, science, and reading scores, respectively. These plots present the results as distributions, as is common in Bayesian analysis. The curves represent draws from the posterior distribution. Shaded blue areas

[17]The secondary table has only four models because data on transition rate from secondary to tertiary education is not available.

	ANER	Completion	Dropout	Repetition
Ideology	−0.246	−0.185	0.121	−0.116
	(−1.066)	(−0.411)	(0.513)	(−1.197)
Polyarchy	12.267	−57.634	−14.748	13.259
	(0.319)	(−0.778)	(−0.333)	(0.909)
GDP per capita	8.847	2.518	12.399	−5.556
	(0.443)	(0.084)	(0.805)	(−0.867)
Urbanization	51.945	−201.914	−282.770	−4.493
	(0.472)	(−0.711)	(−1.884)	(−0.085)
Average education	9.048	7.142	59.411	−1.222
	(0.373)	(0.136)	(1.760)	(−0.137)
Growth	−61.527*	−77.598	3.741	9.851
	(−2.480)	(−1.873)	(0.157)	(1.121)
Lower house share	−11.495	−16.485	4.083	−0.363
	(−1.272)	(−1.044)	(0.420)	(−0.105)
Term length	3.524***	4.372**	−1.293	0.122
	(4.323)	(2.880)	(−1.570)	(0.407)
Primary-aged population				
Secondary-aged population	−0.000	−0.000	0.000	0.000
	(−0.601)	(−0.922)	(1.121)	(0.010)
Time Controls	✓	✓	✓	✓
Country dummies	✓	✓	✓	✓
Observations	40	47	43	51
R^2	0.85	0.63	0.51	0.51
F Statistic	3.21*	1.31	0.72	0.88

Note: *p<0.05; **P<0.01; ***p<0.001

Table 3.2: Secondary level access outcomes analysis using Baker-Greene measure of ideology. T-statistics listed in parentheses below coefficient estimates.

are the 95% credible interval (CI). Variables whose CIs do not cross 0 can be thought of as "significant" in the standard statistical framework. Note that for the presentation of the results, distributions for non-significant variables (and those of less theoretical interest) have been excluded.

In all three models, GDP per capita and previous education are predictors with the largest coefficients.[18] Equally, in no model is polyarchy a significant predictor of test scores. Both of these findings are in keeping with expectations and previous research.

The magnitude on the coefficients from the three models is relatively small, approximately 5 points. Interpreting the substantive meaning of this is challenging. Recall that an average change from left to right government results in a shift -1.49 points overall (on a 20 point scale). Within this, the mean shift to the right is 4.73 and the mean shift to the left is -4.69. However, because the explanatory variables are measured as moving means, the shift would have to represent a *persistent* shift of that magnitude for the previous 15 years. Recall that the PISA scores are normalized to have a standard deviation of 100 points. This means that

[18]Previous education is the aggregate average education in the country.

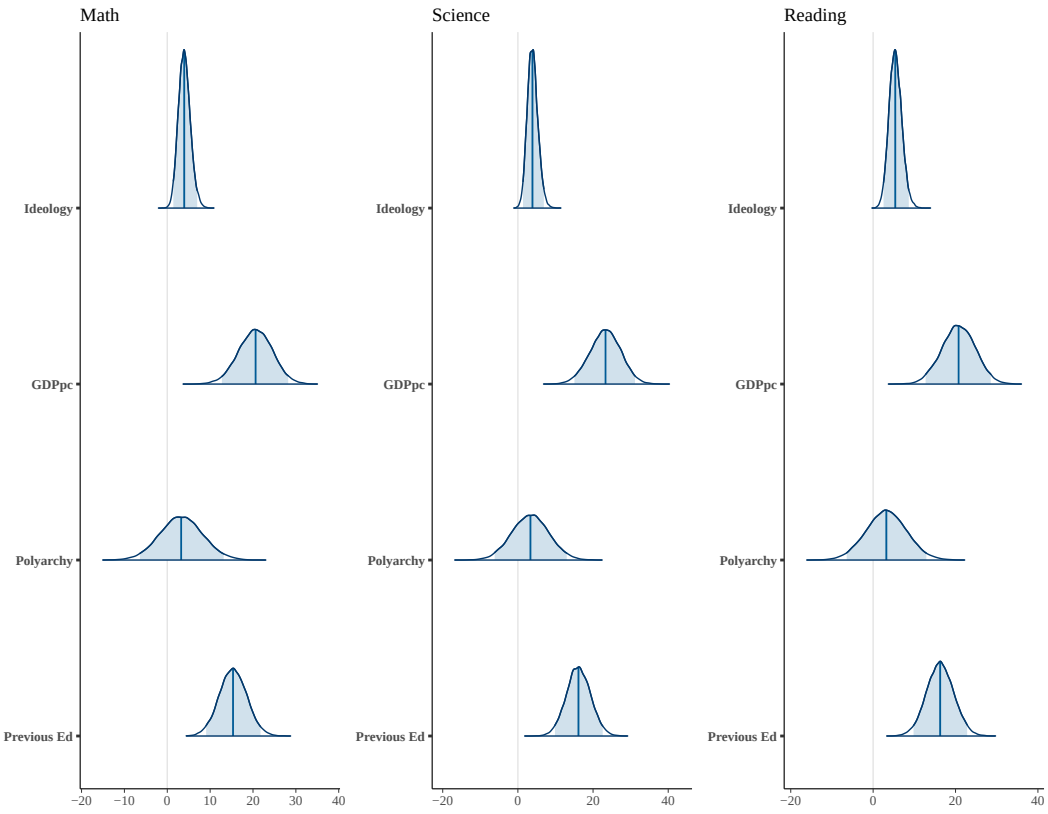

Figure 3.14: Effect of party ideology on PISA scores.

a change of one standard deviation requires a shift from one extreme end of the ideological spectrum to the other *that persists* for 15 years. A persistent shift this extreme is never observed in democratic Latin America.

3.4.3 Equity

Equity of Access

Table 3.3 looks at the effect of partisan ideology on the gender parity index (GPI) for the four access outcomes of interest at the primary level. Only in the model that uses completion rates as the dependent variable is ideology significant. In the case of the completion rates, a positive GPI indicates that women drop out at a higher rate than men, so a negative coefficient means that women drop out at a lower rate under rightist administrations than under leftist. The substantive magnitude of this effect is very small, however.

	ANER	Completion	Transition	Dropout	Repetition
Ideology	0.001	0.001	−0.002	0.163	0.050
	(1.004)	(0.969)	(−1.759)	(0.990)	(1.531)
Polyarchy	0.151	0.246	0.032	−2.467	−2.785
	(1.077)	(1.561)	(0.208)	(−0.153)	(−0.656)
GDP per capita	0.090	−0.040	0.037	−12.732	1.060
	(1.186)	(−0.550)	(0.498)	(−1.222)	(0.492)
Urbanization	−0.420	0.148	1.177*	9.769	4.215
	(−1.004)	(0.304)	(2.087)	(0.166)	(0.305)
Average education	0.085	0.072	−0.037	−6.440	3.388
	(1.363)	(0.950)	(−0.398)	(−0.694)	(1.643)
Growth	−0.065	0.095	−0.041	5.751	−3.161
	(−0.789)	(0.952)	(−0.434)	(0.479)	(−1.189)
Lower house share	0.018	0.059	0.037	1.097	−1.133
	(0.583)	(1.605)	(1.012)	(0.278)	(−1.148)
Term length	−0.003	−0.000	−0.001	0.080	0.032
	(−1.032)	(−0.092)	(−0.202)	(0.137)	(0.344)
Primary-aged population	0.000	0.000	−0.000	−0.000	0.000
	(1.049)	(0.484)	(−1.415)	(−0.193)	(0.153)
Secondary-aged population					
Time Controls	✓	✓	✓	✓	✓
Country dummies	✓	✓	✓	✓	✓
Observations	50	52	47	48	52
R^2	0.64	0.62	0.67	0.53	0.53
F Statistic	1.58	1.68	1.70	1.00	1.10

Note: *p<0.05; **P<0.01; ***p<0.001

Table 3.3: Primary level GPI access outcomes analysis using Baker-Greene measure of ideology. T-statistics listed in parentheses below coefficient estimates.

Finally, table 3.4 looks at the effect of ideology on the GPI for access outcomes at the secondary level. Yet again, ideology is not a strong predictor of these outcomes and the statistics show that the models are poor fits overall. As with the pure access analysis above, alternative specifications for these models reach the same conclusion.

Equity of Quality

Figure 3.15 shows that in terms of gender equity in test scores, partisan ideology is not a strong predictor of differences. In all three subject areas, the 95% CI of the posterior overlaps 0 by a large margin.

3.4.4 General Conclusions

Overall the conclusion of this analysis is clear: partisan ideology explains little variation in measure of educational access, quality, or equity. The only place where there is a clear statistical finding in favor of an effect is in test scores, where the right appears to outperform the left. This finding comes with two major caveats, however. First, the number of countries included in this sample is very small and the findings may not hold much external validity as

	ANER	Completion	Dropout	Repetition
Ideology	−0.000	−0.002*	0.112	0.082
	(−0.220)	(−2.118)	(0.660)	(1.596)
Polyarchy	0.150	0.356	−15.685	−8.792
	(0.929)	(1.949)	(−0.485)	(−1.144)
GDP per capita	−0.054	0.007	−1.304	5.055
	(−0.648)	(0.090)	(−0.118)	(1.466)
Urbanization	0.684	0.736	−50.868	−8.465
	(1.488)	(1.053)	(−0.438)	(−0.299)
Average education	0.068	0.007	12.175	2.990
	(0.669)	(0.056)	(0.476)	(0.632)
Growth	−0.032	0.076	11.810	−9.993*
	(−0.306)	(0.747)	(0.695)	(−2.092)
Lower house share	0.015	0.073	1.854	−1.244
	(0.408)	(1.886)	(0.268)	(−0.684)
Term length	0.004	−0.001	−0.111	−0.032
	(1.268)	(−0.136)	(−0.188)	(−0.189)
Primary-aged population				
Secondary-aged population	−0.000	−0.000	0.000	−0.000
	(−1.784)	(−1.660)	(0.549)	(−0.191)
Time Controls	✓	✓	✓	✓
Country dummies	✓	✓	✓	✓
Observations	40	46	41	48
R^2	0.76	0.73	0.34	0.55
F Statistic	1.80	2.16*	0.34	0.97

Note: *p<0.05; **P<0.01; ***p<0.001

Table 3.4: Secondary level GPI access outcomes analysis using Baker-Greene measure of ideology. T-statistics listed in parentheses below coefficient estimates.

a result. Second, the substantive size of the effect is small. All improvements in test scores should be lauded. The analysis suggests, however, that other variables have more power in determining these outcomes, particularly GDP per capita.

As in the previous chapter, there are very few control variables that are statistically significant in these models. And again, I will refrain from post-hoc justifications of why this may be the case, but recommend that future research investigate the results in greater depth. I will note, however, that the lack of significance is less surprising with these models where R^2 and f-statistics suggest that the overall fit is much less strong than in the output models.

In taking the results from this section in combination with the previous chapter, it may be tempting to reach the conclusion that the right is more *efficient* in education than the left. The results in Chapter 2 suggest the right spends *slightly* less on secondary education and the results here suggest that students perform *slightly* better on test scores under right governments. It is possible this is the case, but these results cannot support this conclusion directly. The results across the models are not directly comparable because of different

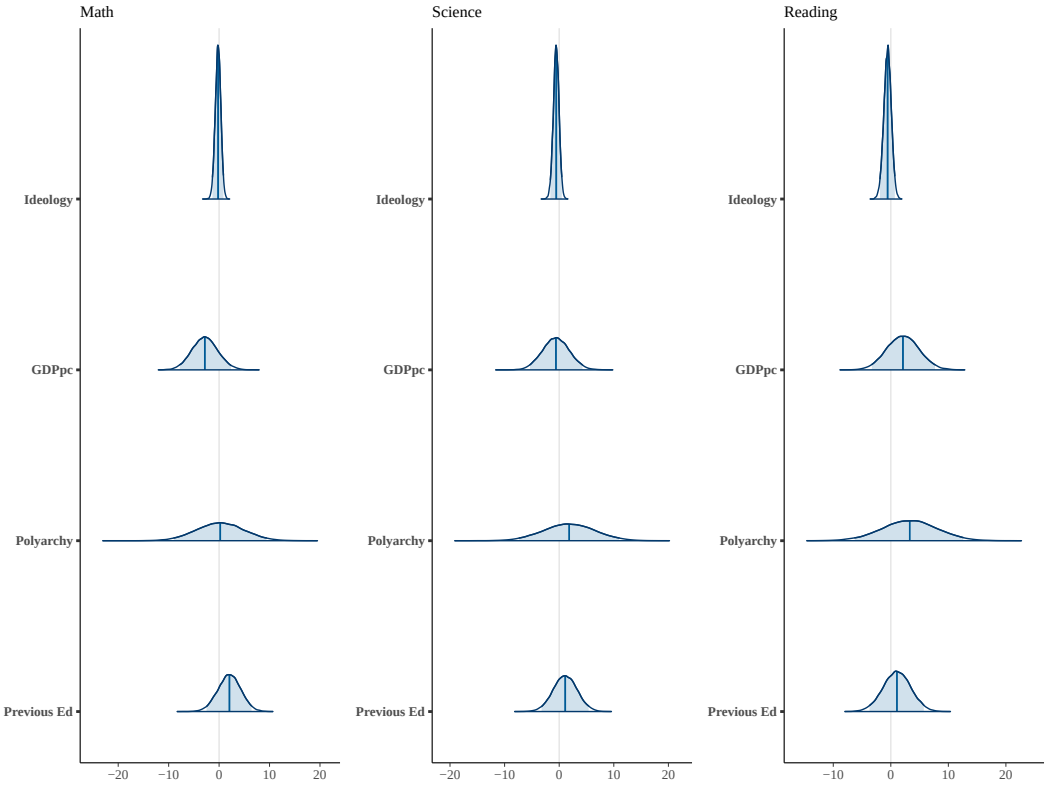

Figure 3.15: Effect of party ideology on GPI in PISA scores.

specifications and a dramatically reduced sample size in the test score results. Future work should consider the issue of efficiency in education, but it is outside the scope of the present study.

These findings are surprising both because they contrast similar studies conducted on OECD countries and because they stand in opposition to the expectations that left and right should produce different outcomes in education. Differences in underlying ideology and fundamental beliefs about inequality led to the reasonable expectation that differences should exist. Having established that these expectations are unmet, the following chapter lays out a theory to explain why left and right have converged on both education outputs and outcomes.

Chapter 4

Explaining Convergence: Policy Legacies, Stakeholder Pressures, and Expert Advice

The division between political left and right is defined based on a difference in beliefs about inequality. These beliefs, in turn, inform policy preferences on a wide range of issues. Despite expectations that the left's concern for equality of *outcome* should result in higher performance on education quality and the right's concern for equality of *opportunity* result in higher performance on access, Chapter 3 demonstrated that left and right have converged on both measures of access (enrollment, completion, transition, dropout, and repetition rates) and quality (test scores). Equally, Chapter 2 showed that the expectation that the left would spend more on primary and secondary levels and staff expenditures because of its ties to the teachers' unions was also unmet. Instead, left and right spend at similar levels both overall and in terms of levels and areas. What can explain this convergence? I argue that policy legacies, stakeholder pressures, and expert advice push left and right toward similar policy positions. Convergence on policy in turn results in observed convergence on outputs and outcomes. Figure 4.1 illustrates the pathway of this process. The focus on this chapter is to explain the three factors on the left hand side of the figure and how they produce convergence in policy.

Have parties, in fact, converged on education policy in Latin America? Figure 4.2 presents preliminary evidence in favor of this convergence. The points in the graph represent the mean similarity between education-related manifesto statements for pairs of parties in Latin America. All comparisons are done between parties competing against one another in a given election. The line shows mean similarity regressed on ideological difference as measured by the Comparative Manifestos Project (CMP). A downward sloping (and significant) line

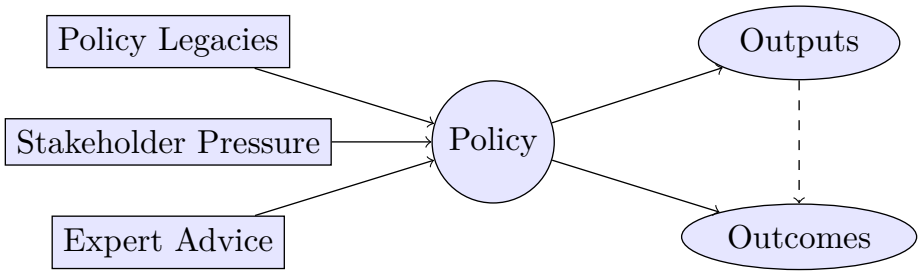

Figure 4.1: Explaining convergence. Policy legacies, stakeholder pressure, and expert advice all contribute to convergence in education policy. In turn, policy convergence produces convergence on outputs and outcomes, both directly and indirectly through outputs.

would suggest divergence between the parties: as parties grow more ideologically distant, their statements should become less similar; a significant upward sloping line suggests a convergence in which more distant parties make more similar statements. The line here is upward sloping, but not statistically significant, which suggests a type of convergence in which partisan ideology is not a strong predictor of education policy statements. This can be interpreted as preliminary evidence of intra-country convergence on education policy. Please see Appendix F for a thorough discussion of how manifesto statement similarity was calculated.

To summarize my argument, policy legacies constrain governments for three primary reasons: bureaucratic inertia tied with path dependency, the (often) high political cost of reversing policy, and the imposition of practical constraints including budgetary limitations and restricting policy creativity. Organized stakeholders, namely teachers' unions, business elites, and parents and students exert pressures on both left and right. Additionally, education policy is an area in which the public never expresses a preference for "less" policy and attempts to reduce the provision of education will always be met with a strong political backlash. This constraint is the direct result of an embrace of democratic rule and can be viewed as the proper functioning of these institutions — elected officials are forced to pay attention to public pressure. Finally, expert advice also pushes parties toward convergence

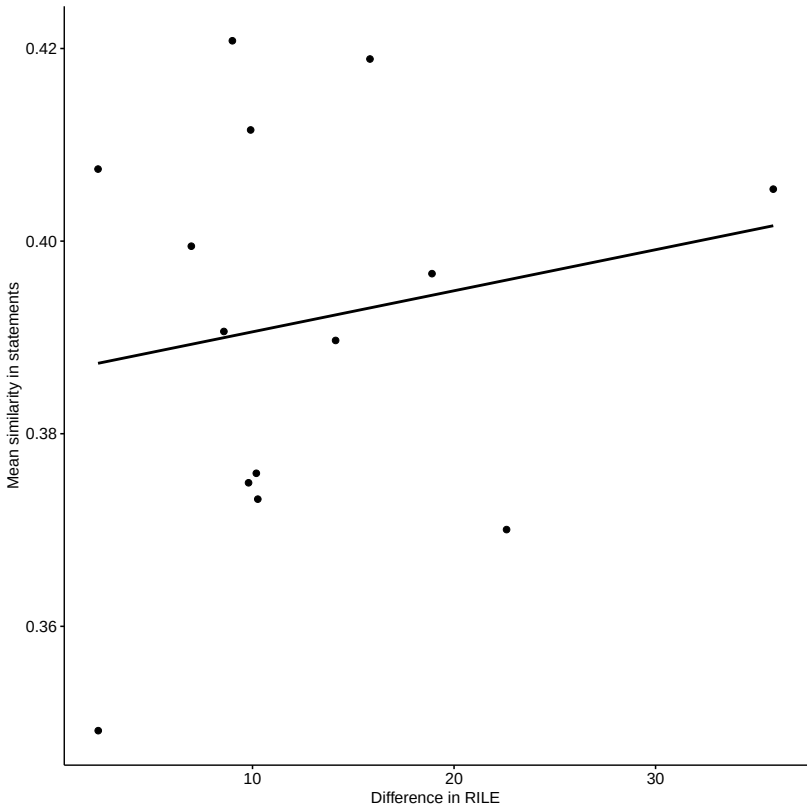

Figure 4.2: **Convergence of education statements in party manifestos**. Each point represents a pair of parties in an election. The X-axis measures the ideological difference (RILE) between the parties, as calculated by the Comparative Manifestos Project (CMP) (Krause et al. 2019). The Y-axis measures the average similarity between policy statements for the pair of parties.

in education. Left and right both have mixed histories with reliance on technocratic advice for designing policy. The neoliberal right (see Luna and Rovira Kaltwasser (2014)) is most closely associated with this kind of policymaking, but parties on the left are increasingly relying on expert advice for crafting education policies as well (Dargent 2015). Because technocrats design policy to fit education challenges and not political goals, the common use of these experts contributes to convergence.

Ideological preferences remain important for defining ideal policy points for parties. In the presence of the convergent forces above, partisan ideology is subjugated. Absent them, however, parties are more likely to fall back on ideological positions and pursue divergent

policies.

These three factors (policy legacies, stakeholder pressures, and expert advice) are absent from the models in the preceding empirical chapters for two reasons. First, there are not clear ways to measure most of the corresponding aspects. It is not clear how to quantify technocratic advice, for example. In other cases, it is possible to imagine a measure but with no clear way to aggregate to the unit of analysis used in these models. For example, one could use length of time a policy has been in place as a proxy for its legacy, but there is no clear way to decide which policies (or how many) should be measured or whether all policies carry the same legacy weight. Even if these questions could be answered, data availability would still prevent its use in this study. Second, the models in the preceding chapters were designed to match as closely as possible those in existing literature to provide a comparison with previous studies and create the possibility of expanding knowledge. It is for this reason that public opinion, for example, is not included in any of the models.

Convergence vs. Conversion Before proceeding it is important to draw a distinction between *convergence* and *conversion*. I define convergence as the observed outcome that policy under left and right is identical and conversion as a fundamental shift in a party's underlying ideal policy position.

Convergence can be either a compromise position between the ideal points of two parties or a unilateral shift by a party on one side of the political spectrum to the other. In other words, convergence can occur when the left moves to the right's position, the right moves to the left's position, or the two meet in the middle. Convergence also encompasses both a passive acceptance and an active embrace of policy. Passive acceptance occurs when a party accepts the status quo and does nothing to oppose or change policy set by a political rival. In an active embrace, a party actively passes or implements the convergent policy.

Policy convergence between left and right should not be considered equivalent to conversion. That is, although left and right tend to move toward similar policy positions on

education, this does not mean that they have moved their ideological ideal points toward one another. Instead, the forces described below cause the parties to support nearly identical policies in many cases, but if these forces were not at work, the two ends of the political spectrum would still advocate different policies.

Convergence and conversion under these conditions are observationally equivalent. From the outside, the actions taken by parties will appear identical regardless of whether doing so is merely politically expeditious (and therefore an act of convergence) or if the party has, in fact, changed its underlying beliefs (and converted). Even if they appear identical, the distinction is important because it can help explain cases in which parties do not converge on education policy. Further, it can help to produce predictions about the kinds of policies parties may pursue if any of these political conditions changed.

4.1 Convergent Forces

4.1.1 Policy Legacies

Bureaucratic inertia

Policy tends to be highly path-dependent and result in bureaucratic inertia (Mahoney and Thelen 2010). Overturning these precedents is difficult, costly, and time consuming (True, Jones, and Baumgartner 2007). Many politicians will prefer to expend political capital on other policy areas. This contributes to a tendency to preserve the status quo, which, in the presence of alternation between left and right, results in convergence.

Education policy follows a logic of path dependence (Pierson 2000) where dramatic changes occur only at "critical junctures" (Lipset and Rokkan 1967; Collier and Collier 2002; Levi 1997; North 1990). Over time, policies become entrenched as bureaucrats routinize the procedures associated with them. Eventually, institutional memory of previous policy fades and the "new" policy becomes universally accepted as the norm. Critical junctures provide an opportunity to break out of these patterns, but they occur only rarely, requiring a shock to be triggered (Collier and Collier 2002).

Path dependence and critical junctures rely on a logic of "positive feedback" loops within a policy setting (Arthur 1994). As Pierson (2000, p. 259) argues, "Policies, grounded in law and backed by the coercive power of the state, signal to actors what has to be done and what cannot be done, and they establish many of the rewards and penalties associated with particular activities." Over time, there are four aspects of politics that contribute to a positive feedback in this environment: "collective action, institutional development, the exercise of authority, and social interpretation" (ibid., p. 260) The routinization of bureaucratic tasks contributes to all four aspects by building patterns of behavior that reinforce these structures.

The positive feedback that drives path dependence in policy also has a linear component in which the longer a specific policy has been in place, the more difficult it is to overturn (Arthur 1994). Institutions connected with a particular policy become more entrenched — institutions simply become *the* way to do things. Thus, convergence is increasingly likely due simply to the passage of time — if policies and institutions remain in place after alternations in power between left and right, the observed effect is convergence.

At times bureaucratic structures are designed intentionally to generate inertia and resist change. Some authors argue that this occurs as a result of electoral competition and uncertainty (McCubbins, Noll, and Weingast 1989; Moe 1991) while others suggest the scope conditions are more limited (De Figueiredo 2002). In both cases, the authors agree that politicians have agency to create bureaucratic structures that are resistant to change. All bureaucracies contribute to convergence, but those designed in this manner will be even more likely to encourage it.

Education systems are particularly susceptible to policy lock-in for several reasons.[1] First, implementation of many education policies occurs at a very diffuse level, relying ultimately on principals and teachers within every school.[2] Coordinating these changes is complicated

[1]The concept of policy "lock in" comes from the economics literature, where researchers observed the tendency in relation to technological advances (Arthur 1989) and has been applied in political science in the study of institutional change Mahoney and Thelen (see, e.g., 2010).

[2]Highly centralized states are more likely to have implemented highly centralized education systems

by the fact that these actors are not bureaucrats by training and may be opposed to the changes. In cases where teachers are suspicious of reforms, they are likely to reject implementation in the classroom and fall back on prior beliefs and actions (Handal and Herrington 2003). Regardless of opposition, teaching practices can become entrenched and changing them challenging, particularly when they conflict with long-standing expectations about the role of teachers (Wood 2007).

In addition, a common perception among veteran teachers is that new ideas in pedagogy are simply repackaged versions of old ideas and many teachers feel they suffer from pedagogical policy whiplash, with "new" methods replacing "old" ones on a seemingly annual basis. As a result, teachers may reject new policies because they do not feel that the effort necessary to implement them is worthwhile if they will be superseded within a few years (see, e.g., Payne 2008; Bell 1995; Hess 1999).[3]

All education bureaucracies are bound by these limitations. Yet bureaucracies vary in the degree to which they are staffed by technocrats. According to a now classic definition, technocrats are "individuals with a high level of specialized academic training which serves as a principal criterion on the basis of which they are selected to occupy key decision-making or advisory roles in large complex organizations" (Collier 1979, p. 403). Technocrats in education bureaucracies are important for their ability to tailor recommendations on best policy to the specific conditions faced in a given country. Their preference for evidence-based policy leads to greater policy consistency, which in turn allows institutions more time to develop and for legacies to become more entrenched.

A subtype of technocrat, the "technopol," also exists in leadership positions in Latin American education ministries. These individuals are both technocrats and political actors who hold appointed leadership positions in the bureaucracy (Domínguez 1997). Technopols

(Lopez 2018). Yet these states are still susceptible to this problem, since ultimate implementation still happens in the classrooms.

[3]This problem also reflects the dual perceptions that education reforms are both rare and exceedingly common. The tension in these views is due, at least partly, to the belief that the substance of many "reforms" is so minimal that no real change has occurred.

have different interests and approaches than pure technocrats (Bersch 2016). Nevertheless, they contribute to bureaucratic inertia. In weighing political considerations for policy recommendations, technopols limit the scope of possible policy to the politically feasible (Domínguez 1997). This simultaneously biases toward the status quo and, in the case of new policies, those which are most likely to endure after a change in administration.

Political costs

Short-term costs, long-term benefits Policy legacies are difficult to overcome because investments in education incur significant short-term costs but are coupled only with long-term benefits (The World Bank 2019).[4] This is particularly true for policies aimed at improving education quality. The time to implement such policies and then to see their benefits can take years or potentially decades. At the same time, the costs are immediate and real. Increasing education spending can only happen if government revenue increases (e.g. through increased taxation or borrowing) or through decreased spending in other areas. Passing meaningful reforms may take significant political capital and potentially provoke a costly backlash if teachers are not on board with the reforms (Grindle 2004).

The short term costs of education policy include both monetary and political costs. New policies require funding and compete against all other policy areas for a slice of the budgetary pie. Politicians can either change how the pie is sliced (redistribute the existing budget) or grow the size of the pie (increase government revenues) (Jones, Zalányi, and Érdi 2014). Both shifting budget priorities and increasing government revenue carry potential political costs — taking money away from existing programs or increasing taxes may result in electoral consequences (Geys and Vermeir 2008; Kone and Winters 1993). Finding funding for new education initiatives is an obstacle that pushes politicians toward accepting the status quo

[4]Education policy is certainly not unique in this regard — other policy areas also have a deadly combination of short-term costs and long-term benefits. Yet even economic policy prescriptions that are explicit about this trade-off (e.g. the neoliberal solutions to economic crises in Latin America in the 1980s) promise positive results in the medium-term (Weyland 2002).

over reform. Maintaining the status quo contributes to convergence both because of the positive feedback of path dependence and because the status quo under an alternation of party power appears as convergence.

Short-term political costs extend beyond those associated with changes to the budget. Time is one of the most limited resources allocated to politicians, creating a premium for the attention they can pay to any policy area (Jones and Baumgartner 2005). The opportunity costs for attention and political capital imply a necessary trade-off between education policy and other policy areas. Logically, unless education is a high priority area, the costs of addressing it are likely to be too high, further encouraging an acceptance of the status quo.

Benefits from education policy accrue only in the long term. Among the ultimate goals of education are macroeconomic growth, individual upward socioeconomic mobility, and citizen formation. These outcomes occur only after a student has completed her education. For both micro and macro economic outcomes, the full effect could be delayed decades after the completion of education. The policy tools aimed at achieving these outcomes, through increased access, quality, or equity, necessarily focus on schooling itself and can only produce these outcomes indirectly. Thus even successful policies cannot be said to have produced the full range of desired outcomes until long after the politicians responsible have likely left office. There are exceptions to this, of course. Education spending on new schools, textbooks, or technology in the classroom will be visible immediately and politicians may reap a corresponding award. These types of projects may indeed increase access (potentially enhancing equity of access in the process). But in the crucial area of education quality, the benefits (if any) of these immediately visible changes, will still be long-term.

To illustrate the dilemma, consider a policy aimed at improving education quality by increasing the minimum requirements for teachers entering the profession. Assume that this policy could be easily implemented by simple decree and that from one year to the next, the students entering the teaching career at universities across the country suddenly had better credentials. Even with these extreme assumptions, it would take one to two decades before

the effects could be observed. The new teachers would have to complete their undergraduate training, enter the workforce, master their craft, and allow more time to pass to become a plurality in the teaching pool before the results might show up in test scores. For its effect on the ultimate goals of education to be observed — remunerative skills and democratic citizenship formation — students have to complete their education and enter the workforce themselves. By the time any of these ultimate benefits occur, the causal relationship to the original policy will have been lost and forgotten by the voting public and those who designed and passed the policy will likely have left office. This example assumes away all costs of the new policy, which, if considered, reduce the likelihood that any politician would consider the trade-offs worthwhile.

This calculus of short-term costs coupled with only long-term benefits makes significant changes unappealing for many legislators, who would prefer to ignore the issue entirely, or opt for "flashier" reforms surrounding education spending (Tarschys 2003). Additionally, the use of the education ministry and budget for non-programmatic politics means that any reforms that would eliminate these benefits create an additional political opportunity cost. These costs contribute to policy convergence directly by encouraging acceptance of the status quo.

Politicians tend to be most eager to pursue policies that research suggests are either not effective for boosting performance, or are much less cost-effective than a variety of alternatives. Reducing class size, for example, has been shown to increase performance under certain conditions, but the cost of implementing this policy is much higher than alternatives (such as programs targeted toward a specific population at risk) that are as or more effective (Busso et al. 2017). In cases when politicians have implemented new, sometimes radical, policies, they often do so on a trial or temporary basis (Hess 1999; Payne 2008). The tendency is to give these experiments less time than is truly necessary to show results. And in cases where sufficient time is given, new crises or political priorities arise in the interim so that the programs are never scaled up. One reason that politicians tend to cut successful

programs short (or decline to give sufficient time to evaluate experiments) stems from their ability to claim credit for the success.

Many reforms cannot maintain their successes or fail to replicate beyond their original test sites (Berman and McLaughlin 1975) and many aspects of schooling appear to be highly resistant to changes (Cuban 1993; Gibboney 1994). As a consequence, education projects are rarely deemed highly successful (Payne 2008) and the perceived benefits to politicians are unlikely to outweigh the immediate and clear costs. Even if education policies are rarely deemed completely successful, they nonetheless generate their own expectations in the electorate for continued service provision. Any policy viewed as reducing the provision or quality of education will be rejected by a wide range of voters, adding another political cost to reforms and encouraging status quo policy.

These problems affect both left and right. That the costs of meaningful education reforms are so high contributes to the relative rarity of dramatic change in this policy area. Instead, stasis and slow policy drift are much more common. In a scenario in which political costs of reforms are high, politicians are likely to rely more heavily on bureaucrats to make and implement policy (Hood 2010), which in turn leads to policy convergence, as described above.

Patronage and clientelism Patronage in the civil service continues to be a defining feature in many Latin American countries (Grindle 1977; Gordin 2002; Dargent 2015). This structure adds another potential political cost to changes in policy. Any change that may result in a reduction of staff will be considered politically untenable both because of the immediate costs (backlash in public opinion for laying off workers) and in the long term (losing the ability to leverage those positions for political gain). The office of minister of education has long played this role in Latin America, where the average tenure for a minister between 1990 and 2012 was only 23.7 months.[5] Many of these appointees have neither a background in education nor an interest in systemic changes. The use of patronage postings encourages

[5]Calculation by author based on data from Corrales (2002) and extended through 2012.

stasis and status quo in education policy.

Equally, clientelist networks across the region continue to view education ministries as sources of funds to distribute in the form of discrete credit-claiming projects like the construction of new schools and purchase of technology over more pressing programmatic changes (Ames 2001; Brunner et al. 1995; Luna and Mardones 2016). Foregoing these funds works as a political cost for the party in power and parties in the region have resisted ceding this power (Chambers-Ju and Finger 2017).

Practical constraints

Policy legacies generate three additional constraints on politicians beyond bureaucratic inertia and increasing political costs for policy reform. Changes to policy may require massive expenditures of time or money or require greater capacity than the state is capable of providing. Existing policy may also place "blinders" on policymakers, limiting the scope of solutions (Prahalad 2004).

Education policy, indeed no policy, exists in a vacuum. Rather, every aspect of the state education system that requires funding competes in the budget with every other element of public policy (Wildavsky 1986), both discretionary and non-discretionary. Legacies associated with non-education related expenditures may create budgetary constraints that limit the scope of possible education reforms. These legacies are likely to transcend political boundaries and thus drive left and right toward convergence. For example, the defense budget is unconnected with education spending and is set in large part by external factors and existing spending levels. Education must compete, nevertheless, with defense for a slice of the budgetary pie.

Education funding may face three practical constraints. First, state capacity is required to implement many policies in the education sphere. If the state lacks sufficient capacity, policymakers may be limited in the scope of policies they consider (Besley and Persson

2014).[6] Second, while increasing government revenues may provide a solution to budgetary trade-offs, doing so may not be an option in a context where government revenue is often dependent on fluctuating commodity prices that are set by global markets. At the same time, taxation (and particularly income taxation) is a perennial issue in the region despite significant reform attempts (Gavin and Perotti 1997; Goñi, López, and Servén 2011; Shome 1999; Tanzi 2000). Third, education systems have many fixed costs (administrative overhead and physical facility maintenance, for example) that will represent greater percentages of smaller education budgets. These budgetary constraints create policy constraints that affect both left and right and contribute to an explanation of why policy legacies drive convergence in education policy.

Existing policy also contributes to a limitation of creativity in designing new policy because of human cognitive limitations. As policy generates positive feedback and institutions become entrenched, the ability of many actors involved in and close to those institutions become more limited in their ability think about possible alternatives and instead tend to compare current problems to past problems (Jones and Baumgartner 2005). For example, if the institutionalized response to truancy at schools is punitive, policymakers may become blinded to possible alternatives such as cash transfer programs that increase immediate incentives for attendance. The longer an institution has been in place the longer it becomes *the* way to do that thing. Both left and right suffer from this same problem, contributing further to the ways in which policy legacies drive convergence on education policy.

4.1.2 Stakeholder Pressures

Education is a policy area in which there is a high number of stakeholders. Arguably, everybody is a stakeholder in education given the relationship between schooling, state formation, and economic development. But not all stakes are equal, nor is power equally

[6]Note that little research exists on whether there is a relationship between partisan ideology and state capacity. However, Geddes (1994) has found that both democratic and authoritarian governments have equal interests in developing state capacity.

distributed across stakeholders. The most important stakeholders in education are, in decreasing order of power, the teachers' unions, business elites, and parents and students. Elected officials and political parties must take these actors into account both in formulating electoral strategies and in crafting policy. Parties on both left and right are also subject to general public opinion on education and must respond to voter demands in this area.

Despite employing electoral strategies that pursue votes from different sectors of society and maintaining different relationships with stakeholders, left and right are nonetheless pushed toward convergence on education policy for two reasons. First, organized stakeholders create demands that cannot be ignored even if they are not part of the electoral coalition of the party in power. Second, electoral pressures are reinforced by the belief that education is a right, making it impossible to reduce its provision.

Organized stakeholders

There are three organized stakeholders that play a significant role in education politics across the region: the teachers' unions, business elites and university rectors. Of these, the unions are by far the most important. Students and parents represent two other groups that have, in some cases, organized and created important pressures on politicians. However, they have less power than the former two groups because their organization is uneven across the region and inconsistent across time and because their interests are not as narrowly focused as those of unions and their political connections not as strong as business elites. For this reason they are secondary actors in this policy space.

Teachers' unions are capable of opposing systemic changes in a disruptive manner, as highly organized and politically connected actors. Although the strength and cohesiveness of unions varies by country, all exist for the sole purpose of advocating for the labor conditions of their members (Moe and Wiborg 2017a). Union leadership is often pushed toward more extreme political engagement (e.g. disruptive protests or strikes) in the face of even moderate changes they perceive as a threat to themselves or their members because they have few tools

in their political arsenal.

These disruptions can be costly to politicians in at least two ways. First, they can shift the public discussion and set the agenda, thus taking power away from politicians who seek to do the same (Berkovich 2011). If lawmakers lose the ability to set the agenda they may also lose their ability to design their preferred policies, further weakening their political position. Second, governing parties or politicians seen as failing to address disruptions may fall in public opinion, thus harming their electoral chances (Murillo 1999).

Teachers' unions across Latin America have traditionally maintained stronger relationships with the left than the right.[7] However, the left has not always honored this relationship by including the unions in discussions of education reforms and has suffered the consequences as a result — costly public disruptions by striking teachers and the corresponding political costs (Grindle 2004).

Unions provide parties with two important electoral advantages. First, they are uniquely situated within one of the most connected hubs of any community: the schools. The unions are able to use this advantage to pressure voters to vote along union lines, essentially acting as brokers within a clientelist network (Larreguy, Montiel Olea, and Querubin 2017). Second, the unions can provide a bloc of votes — those of its own members.[8]

Between historical ties with the teachers' unions and the temptation to gain the electoral advantages noted above, the left may pursue policies favored by the unions. These include policies that advance labor conditions for teachers such as higher salaries for teachers, more class prep time, and tenure. Favored policies may also involve attempting to protect systems that favor seniority and disfavored policies include any attempts to measure teacher performance or tying salary or job security to such assessments.

[7]Although this is the general trend, it is not a universal one. A notable exception is the case of Mexico, where the unions have successfully used their ties with the political right to win favored policies (Murillo 1999).

[8]There exists, of course, variation in the degree of control that unions have over the votes of their own members. But in all cases, the union has at least strong influence over its members' votes.

Business owners represent a second important actor in electoral coalitions. With respect to education policy, business elites have two competing interests. On the one hand, they recognize the importance of strong public education systems in order to produce a supply of high-skilled workers capable of competing in a global economy (Moe 2017a). The business community is diverse and generally does not behave as a single actor (Schneider 2004; Moe 2017b), but when a lack of skilled labor is an obstacle to economic growth, they will act together, as was the case in Mexico, where "as a result of Mexico's dismal PISA results, business leaders in particular became alarmed by how low levels of human capital might affect Mexico's economic competitiveness" (Chambers-Ju and Finger 2017, p. 231). In addition, many business elites will look to send their children to prestigious state universities, which generally have nominal or no tuition. On the other hand, they also have a general interest in reducing their tax burdens, particularly when they are less likely to take advantage of the primary and secondary education provided by the state (Ansell 2010).

The right has long enjoyed a stronger relationship with business elites than the left (Eaton 2014), pushing their education policies toward those preferred by this group. In addition to direct support at the polls, including business elites in an electoral coalition can come with the benefit of the financial resources they are able to contribute to campaigns.

University rectors play an important role in education debates in Latin America as a representative of the interests of professors and universities, writ large (Bernasconi 2015). This dual representation reflects a split political impulse by the rectors — progressive in its push for justice and enlightenment and conservative in its desire to preserve the university institutions (Peñalver 1979). As a result, rectors are not consistently aligned with either left or right. Nonetheless, they hold real political power and no party can afford to ignore their interests in political debates about higher education.

Parents and teachers are also stakeholders in education policy. Parents represent a significant part of the electorate, but are frequently not well enough organized to be a major force in education politics. Parents are also less homogeneous as a group than teachers —

they have diverse and often competing interests. Not all parents will use the public school system and all have additional interests from their other roles as taxpayers and workers. In cases where they can overcome their collective action problems, parents *can* put pressure on lawmakers through public demonstrations. Similarly, students can also play a similar role, though their ability to organize is even more limited and their political power usually much less since they do not vote.[9]

Students face even steeper hurdles to overcoming collective action problems. Difficulties with organization and communication are compounded by their young age and still developing cognitive capacities mean that their understanding of complex policy issues and ability to comprehend time and consequences related to these policies may be limited. The biggest challenge to primary and secondary students, however, is that their status as minors means they do not have the right to vote and politicians, therefore, have little electoral incentive to engage with them directly.[10] When either parents or students are able to overcome these challenges and create political organizations, their demands are unidirectional: greater access to higher quality education.

Common electoral pressures

Parties exist in democracies to win elections. They construct strategies to gain votes by positioning themselves and enacting policies in line with their constituents' demands (Bartels 1991; Erikson, MacKuen, and Stimson 2002; Wlezien 1995). Responsiveness to voter interests is fundamental to democracy and is visible both in campaign strategies and the policies pursued by elected politicians. Thus if voters make demands about education, parties should be expected to respond accordingly.

Opinions of education systems across the region are low. While the regional average for those who are "satisfied" with their local education system is 58.4% (according to the Latin

[9]Chilean students are the obvious exception here. Chapter 5 describes some of the ways in which students in that country have placed a major role in education politics.

[10]In many Latin American countries the age of majority of 16, but this still excludes about half of students in secondary education.

American Public Opinion Project (LAPOP n.d.)), these numbers are notably lower in many countries, with satisfaction at 24.4% in Argentina, 32.7% in Paraguay, and 38.1% in Peru. Because of this, politicians on both sides of the aisle may be pushed toward taking action on this issue. Although the preferred policies of left and right will differ for various aspects of the education system, public opinion about the most pressing issues within education is independent of the party in charge. To the extent that the public dictates the discourse on education policy, political options will be limited to a similar extent for both left and right, pushing them toward convergence.

Stakeholder pressures and convergence

Stakeholder pressures contribute to convergence in two primary ways. First, education is considered a right and reducing its provision is (nearly) impossible. Second, interests of the two key organized groups overlap in some cases and where they do not, both groups are sufficiently powerful to demand attention regardless of the party in power.

Education is considered a fundamental human right (UN General Assembly 1948). While it is possible to update or replace specific education programs, they cannot be eliminated without serious political consequences.[11] The general public is unwilling to accept a reduction in the provision of education (Campbell 2012). The positive feedback that these systems entail tends to drive them toward ever higher levels of provision (ibid.).[12] Even if only one party is responsible for the increases, an inability to roll back those changes will result in convergence. In addition, the state has an intense interest in controlling education because of its intimate connection with citizenship formation and economic development.

At times, the interests of the teachers' unions and business elites will align, specifically, when a lack of education quality is seen as a hurdle to further economic growth and proposed

[11]Others have noted this tendency with the retrenchment of the welfare state (Pierson 1994) and with policies such as Social Security in the United States (Campbell 2003).

[12]Note that while the public will never demand (or accept) *less* education, it may view education spending as too high. The "thermostatic" model of public opinion (Wlezien 1995; Soroka and Wlezien 2010) suggests that in this case politicians will respond by reducing education spending.

changes support the labor conditions of teachers. Outside of these circumstances, both the unions and business elites are sufficiently powerful that they cannot be ignored entirely by either party. The actors, as well as the parties themselves, will attempt to present a strong opposition force whenever their own party is not in power. The checks available in the legislative process (though more limited in Latin America than other presidential democracies), allow roadblocks to slow, delay, or derail attempts to change policy. This pushes policy toward a stalemate — the status quo.

4.1.3 Expert Advice

Politicians on both left and right have moved toward a more technocratic form of policymaking across the region beginning in the 1980s (Dargent 2015). These bureaucrats, with expertise in education, economics, or related fields, provide recommendations to politicians based on evidence and theory and are more interested in finding a solution than maintaining a party line. At the same time, politicians (and technocrats) receive outside pressure from international experts in the field. Ideas diffuse through professional networks and push these actors toward similar policies.

Expert advice pushes left and right toward convergence on policy for two reasons. First, the problems they address are entrenched and solutions, which remain constant despite changes in the party in power, will span multiple administrations (Domínguez 1997). Any politician willing to take the advice of these experts will be moving toward convergence by definition. Second, although the left is concerned more with equity and the right with economy, the recommendations for addressing both concerns are often similar if not identical. Again, in these cases following expert advice will lead to convergence, although politicians are likely to stress the intended effect the policy will have on their area of focus and address the other only to the extent it can provide an electoral advantage.

In recent years the neoliberal right no longer has a monopoly on technocratic ministry management (Dargent 2012). Pushed by domestic and international factors, the left has

also moved toward more toward technocratic administration. Domestic reformers willing to set aside partisan commitments for improvements to education systems have appointed stronger ministers of education. These ministers, in turn, have led a transformation within the ministries toward a more technocratic system. However, patronage appointments in the civil service continue to dominate in place of merit-based hiring systems, even though such systems are mandated by law across the region (Grindle 2010; Schuster 2017). Internationally, organizations like the World Bank and the Inter-American Development Bank have led a dialogue that promotes both technocratic reforms to ministries and specific education policies. This shift further contributes to the convergence of left and right on education policy because recommendations from policy experts will remain constant regardless of the ideology of the party in power.

The experts

Experts generally fall within one of three groups: technocrats working within an education bureaucracy, academic researchers with university affiliations, and researchers with think tank or lobbyist affiliations.[13] All three offer recommendations to politicians on both left and right, albeit through slightly different mechanisms and under slightly different circumstances.

The lines between "domestic" and "international" experts are difficult to draw because actors move fluidly between the two groups. Many "domestic" experts have received training at institutions in the United States or Western Europe and maintain close professional networks with their counterparts in other countries while many "international" organizations like the World Bank have extensive staff from the countries in which they work. Experts themselves tend to converge on policy recommendations because of the diffusion of ideas across international borders under both left and right governments (Verger, Novelli, and

[13]Educación2020 in Chile and Mexicanos Primeros are two examples of such domestic organizations while the Inter-American Development Bank and UNESCO are international examples.

Altinyelken 2012).[14] For these reasons, I do not attempt to strictly distinguish between the two groups.

Technocrats are also more willing to experiment with new ideas and policies. As Domínguez (1997, p. 6) argues, "Technocrats offer a methodology to understand social problems that rests on a belief in the ability to arrive at the optimal answer to any problem. Their key criteria for action are realism and efficiency." These qualities of technocrats lead to convergence because they are not tied to any particular ideology. The advice they give may, at times, align with an ideological position, but it will not be driven by one nor will it always align with the same ideology.[15] Regardless of the political orientation or even type of administration (democratic or authoritarian), they will seek out what they believe to be the *best* solution for a problem and not allow political concerns to color this solution (Centeno 1993). Technopols, on the other hand, have the technocratic background, but will weigh political considerations in policy recommendations to a greater degree than the ideal type technocrats. Policy convergence is thus driven by the degree to which the bureaucracy is staffed by technocrats and the extent to which those technocrats are *technopols*. As both left and right rely more heavily on technocrats, the more likely both are to implement similar solutions.

As members of the government, technocrats can provide recommendations both directly to politicians and on demand. They do, however, also conduct research and produce recommendations outside of direct requests from politicians, which can then be saved and provided to leadership when needed.

Researchers with university affiliations share an important trait with technocrats: a devotion to following evidence and finding solutions over any political motives.[16] University-

[14]Dale (1999) outlines several other methods in which education policy is taking a global shape (e.g. harmonization and standardization), but none of these are relevant in the Latin American context.

[15]Recommendations for advancing equity aligns with the left's ideology while recommendations to implementing merit pay for teachers aligns with the right's ideology, for example. Neither is made *because* of this alignment.

[16]This is not to say that university researchers do not have personal political opinions or that these never

based research is continuously ongoing, like that of technocrats. However, their work differs in important ways. First, university research often has no deadline, meaning that the pace of research can be slower and more deliberate. Second, university research can explore a wider range of questions than that conducted by a government bureaucracy, whose agenda may be limited by budgetary constraints or policy priorities (Lipsky 1980). These factors increase the possibility that university researchers will find new or creative solutions to existing problems or identify new problems that must be addressed. Finally, university research is made public, but not presented directly to politicians and policymakers unless it has been specifically requested. As a result, much academic research goes unread by these policymakers. Research conducted at universities, however, is an important source of knowledge for technocrats, so the findings may make their way to legislators indirectly.

Researchers at think tanks or lobbying organizations are more likely to have a political agenda of their own and are more likely to produce research that aligns with a political ideology than their university researcher counterparts. Additionally, while politicians may reach out to these groups and request research,[17] these groups will also provide their research to politicians unsolicited. As Weaver and McGann (2000, p. 5) write,

> One role performed by many think tanks…is carrying out basic research on policy problems and policy solutions in a fashion similar to that done by university based researchers…A second role…is providing advice on immediate policy concerns that are being considered by government officials.

Technocrats began their role in Latin America primarily in economics and primarily under non-democratic regimes in the 1980s (Dargent 2015). As these states transitioned to democracy, the neoliberal political right embraced the technocratic administration of the outgoing regimes and continued the practice of employing experts to design policy (Luna

influence their research. Rather, as a group, they are trained to focus on arguments and evidence over any personal prejudices.

[17]This lowers the cost of information for legislators, who are overwhelmed with the quantity of information available (Weaver and McGann 2000)

and Rovira Kaltwasser 2014). During this period, think tanks also took on an increasing role in policymaking across the region (Truitt 2017). In many cases the left has also started to embrace experts within their policymaking structures so that now both left and right are utilizing them as resources (Dargent 2015; Silva 2009; Babb 2005).

The advice

Experts have long drawn a distinction between access and quality in education (Corrales 1999). Further, reports over the past three decades have voiced the concern that efforts to improve both access and quality be focused on the lowest-performing students (see, e.g., The World Bank 2018; The World Bank 1995). Since the lowest performing students are most frequently the poor and those in rural areas, the policies are equivalent to calls to increase equity in access and quality. At other times the call for equity-focused policies is explicit (Puryear 1997; Wolff and Castro 2000; Bassi et al. 2012).

Some of the advice also falls outside of an access/quality divide and focuses on systemic structures. Many of these recommendations could be classified as "finance-driven," to use the language of Mundy (2005). These included measures focused on generating greater efficiency by focusing spending at lower levels, increased privatization, and reducing the cost per pupil (ibid.). In addition, many reports from the 1990s and 2000s recommend decentralized education systems that provide local actors greater flexibility in designing and implementing programs (see, e.g. De Cerreño and Pyle 1996; PREAL Advisory Board 2005). More recent recommendations are less likely to identify decentralization as an explicit goal, but there remains support for the idea that local actors should be given flexibility in tailoring solutions to specific situations (The World Bank 2018).

Access Expanding access to education has long been a priority of policy experts (The World Bank 1995). Changes to recommendations here have followed the progress of meeting the MDGs (World Health Organization et al. 2008) and SDGs (UN 2015). While experts

previously focused on pushing for universal coverage of primary education, the focus now rests more on secondary education (Bassi et al. 2012) and increasingly pre-primary education (UNESCO 2009).

The development literature addresses three general problems in access: lack of educational opportunities, barriers to entry in available programs, and insufficient incentives to stay enrolled. In the Latin American contexts, advice focused on the first two areas in the early 1990s and earlier (Wolff, Schiefelbein, and Valenzuela 1994) but has shifted toward the third area as the region has built up sufficient infrastructure to accommodate student needs. The argument is that if students and parents do not believe there is a payoff to education, they will not attend. Thus, in order to increase enrollment and completion rates (while simultaneously decreasing dropout and repetition rates), the answer is to improve the quality of education so that the market will reward graduates (The World Bank 1995; Busso et al. 2017).

A similar approach of incentivizing school attendance is the conditional cash transfer program (CCT). CCTs continue to be recommended as a way to increase enrollment, particularly at the secondary level (Bonal, Tarabini, and Rambla 2012; Busso et al. 2017). CCTs illustrate well the pathways in which expert opinion resulted in policy convergence. After the first CCTs starting in Mexico in the mid-1990s, at least 21 Latin American and Caribbean nations had implemented them by 2012 (Hunter 2020). As Sugiyama (2011) illustrates, the partisan character of the executive under which these programs are implemented is highly varied. Of the 18 countries that had implemented CCTs between 1997 and 2008, two were under left presidents, five under the center-left, four under the center, four under the center-right and four under the right (ibid., p. 258). The driving force behind their spread was the diffusion of the idea through international networks of technocratic experts (ibid.) furthered by monetary support from international organizations (Hunter 2020).

Learning and emulation are central to the diffusion process of CCTs across Latin America (ibid.). The first CCTs to be implemented — Mexicio's Progresa (later renamed Oportu-

nidades) program and Brazil's Bolsa Família — attracted the attention of international observers, both receiving foreign delegations from a large number of countries (ibid.). International organizations supported the spread of information on the programs, documenting their successes (Sugiyama 2011) and hosting a large number of conferences on the subject (Osorio Gonnet 2018). Further, international organizations like the World Bank offered loans to support CCTs (De la O 2015). The idea behind CCTs thus became available to domestic policymakers who could see its effects in action in neighboring countries, could learn about it through conferences and positive reports, and could potentially receive funding to implement it. It is through these pathways that international experts contribute to convergence on education policies.

Quality Experts recognize the connection between providing increased access and providing increased access to *quality* schools. The following quotation is typical of reports from international experts:

> Getting all children through a full basic education cycle is an important goal, but the ultimate purpose of schooling is to provide children with an education that equips them with the skills, knowledge and wider perspectives they need to participate fully in the social, economic and political life of their countries. Delivery of good-quality education is ultimately contingent on what happens in the classroom, and teachers are on the front line (UNESCO 2009, p. 7).

In contrast to the "finance-driven" reforms focused on increasing efficiency, many quality reforms could be categorized as "competitiveness-driven" (Mundy 2005). These systemic recommendations included the introduction of standards-based reforms, increased school competition (usually through school choice), and improved teacher and leadership training (ibid.). Many of these recommendations also broke a long-standing tradition of ignoring curriculum, pedagogy, and evaluation to provide guidance on these areas (Rizvi and Lingard 2010). The logic of standards-based reforms is to establish education goals, then provide resources to reach those goals, and to measure (using standardized tests) whether students

have reached them. In advocating for these reforms, international experts established many global norms for both the expectations of students and the proper curriculum and pedagogy necessary to have them reach these minima (Rizvi and Lingard 2010).

The prescriptions for how to improve the quality of education are less unified than the recommendations for increased access, however. Debate continues about the role of technology in the classroom, the importance of student-teacher ratios, and increasing competition in the teacher selection process. For many years, experts focused on issues of "accountability," which translates into a combination of student testing and merit pay for teachers (PREAL Advisory Board 2005). The quality of teachers is a long-running theme in the literature, but there is no consensus as to how this should be achieved. Some suggestions include efforts to modify classroom behavior (Wolff, Schiefelbein, and Valenzuela 1994) and increasing the prestige of the profession (Board 2001; PREAL Advisory Board 2005). These reports also push the idea that "skills" should feature prominently in the design of education policy so that students can increase their human capital and compete in a global economy (Rizvi and Lingard 2010; Mundy 2005).

One of the recommendations for improving education quality is to improve the quality of instruction. In turn, one suggested method for doing this is to introduce merit pay for teachers, which has been shown to produce better education results (Woessmann 2011a; Woessmann 2011b). According to one typical report, "teachers may be one of the most important school-side variables affecting student leaning…Paying teachers for what they know and do may improve student leaning outcomes" (Vegas and Petrow 2007, p. 208). This type of policy fits well with the neoliberal right's vision for education. Specifically, merit pay programs evaluate teachers and provide financial rewards to those who perform well. Differential pay fits clearly into the logic of efficiency and competition that forms the basis of neoliberal thinking. Although experts recommend this strategy, it has been implemented in very few places, partially because of strong opposition from teachers' unions (Goldhaber et al. 2008).

In perhaps the most comprehensive and up-to-date study, authors at the Inter-American Development Bank (IDB) provide a series of meta-studies on the most effective practices for improving education quality (Busso et al. 2017). These recommendations include focusing on pre-primary education as a crucial starting point for students and identifying the worst performing schools and targeting resources to them. However, they offer the sobering conclusion that "there is limited rigorous evidence on what works to improve student learning in secondary school" (ibid., p. 188). At the primary level, the authors reveal further uncertainty about best practices, noting that "countries need to invest in producing high-quality evaluations to determine the effects and costs of alternative interventions" (ibid., p. 149).

Left, right and expertise

Politicians accept the advice of experts for several reasons. In some cases politicians accept this advice because they must. Although international organizations have refrained from imposing rules about education on Latin American countries in recent years, the 1980s and 1990s saw many programs with conditionalities that affected education by reducing public budgets (and in many cases increasing poverty) (see, e.g., Bonal 2002; Verger, Novelli, and Altinyelken 2012).[18] In other cases politicians accept the advice because they have an interest in making their education systems competitive (Cerny 1997; Brown and Lauder 1996; Carnoy and Rhoten 2002) and the recommendations provided by this group are seen as a way to accomplish this goal.

Availability and (occasional) financial support are not the only reasons that experts are able to exert influence on policy. Politicians may also opt to delegate policymaking responsibility to technocratic experts as a political strategy to avoid responsibility or to reduce

[18]There exist other explanations for why politicians have accepted the advice of international experts. One strand of literature on the "globalization" of education policy makes the argument that the diffusion of education has been, essentially, a byproduct of a larger diffusion of the Western nation-state model (Anderson-Levitt 2003). Others argue that the spread of a global education system is the result of a dissemination of educational policy and ideology (Schriewer and Martinez 2004; Carney 2008). In either case, the result is that international policy experts are contributing to convergence between left and right.

their work load (O'Donell 1994; Williams 2006). Additionally, the international social, educational, and professional networks in which these experts move means that many times there are close, often personal, connections between those making and those taking recommendations (Centeno and Silva 2016). International organizations support the spread of information through these networks partially by hosting conferences on ideas in education policy reform (Osorio Gonnet 2018). Having struggled with attempts to improve education for so long, politicians and bureaucrats are open to recommendations from experts who present examples of successful policy to a broad audience.[19] Further, many politicians themselves come from a technocratic background and are, therefore, more open to accepting advice from these actors (Huneeus 1998).

Expert advice, both domestic and international, contributes to education policy convergence for two reasons. First, because of the technocratic nature of these actors, their recommendations are driven by research and evidence, not political ideology. As a result, they will recommend the same policies to governments on both sides of the aisle. These recommendations are disseminated widely and thus freely available to policymakers looking for ideas on how to improve education (Hunter 2020). Any government that is willing to accept these recommendations will naturally move toward a convergent position with any other party also employing experts to design policy.

Second, in many cases, the recommendations for policies to address equity, the chief concern of the left, and economy, the chief concern of the right, will be identical. In the broadest terms, there will be overlap when there is a match between the skills that would be gained by raising the academic performance of the lowest group and the labor pool needed for growth in the country's major industries. Recent reports summarizing expert recommendations continue to push for targeted interventions on the lowest performing and poorest schools in order to make the biggest improvements (The World Bank 2018; Bassi

[19]The reach of these networks is considerable. Consider the case of Salta, Argentina, a remote interior province which received a delegation of Finnish education researchers in 2016 to present a study on discipline in Finnish classrooms to the teachers of Salta (Berruezo 2017).

et al. 2012). In particular, the recent work in this area stresses the importance of *skills* in improving education systems (Busso et al. 2017). By focusing on the tangible capabilities that students graduate with, these recommendations recognize two realities: that the lowest performing students are not leaving school with remunerative abilities and that fixing this deficit will allow economies to continue to grow in a competitive global economy that places increasing cognitive demands on even low-skilled labor.

4.2 Divergent Forces

There are two primary divergent forces that work to drive left and right apart on education policy: priorities and macroeconomics. Party platforms convey not just policy positions but also the relative importance of different policy areas. That is, they express partisan policy priorities. Underlying ideological preferences shape priorities within education generally, and the priority of education in relation to other policy areas. Where divergence in education exists, it is largely the result of divergent priorities between left and right. Macroeconomic factors provide a second divergent force, albeit one outside the control of parties and one likely to dominate regardless of the presence of convergent forces.

Beyond priorities, preferences and underlying ideology can create divergence as well in the absence of policy legacies, stakeholder pressures, and expert advice. Under democracy it is unlikely that all of these forces will disappear, but they can weaken in ways that create openings for ideological parties to make decisive changes to education systems.

4.2.1 Policy Priorities

Underlying ideological factors can motivate education policy priorities and the priority of education vis-à-vis other policy areas. The left's focus on equity leads to a predictable focus on policies aimed at equitable distribution of education. The left prefers these policies over those aimed purely at boosting absolute performance on education and quality metrics. Given the purported connection between education and equity enhancement, education is more likely to be a higher priority than other policy areas.

The right's ideological preferences push it toward policies more directly aimed at boosting overall economic performance. This tends to align more closely with concerns over absolute levels of access and, to a greater extent, quality. This logic also means that education is likely to be a lower priority policy than other areas because education is such a long-term (and in many ways indirect) way to boost economic performance.

4.2.2 Macroeconomics

Some policy divergence between left and right can be explained by forces outside the government's direct control: macroeconomics.[20] This power is also likely to take precedence over any divergent forces. For example, even if left and right have reached a common level of funding for education, an economic recession that severely limits government revenue may force those in power to break from the status quo. In the Latin American context, many economies continue to rely on commodity exports with volatile prices determined by a global market (Wibbels 2006; Campello and Zucco 2016).

Macroeconomic factors play an important role in determining education policy. They do so indirectly through their effect on government revenue. They can also dictate policy priorities, particularly in times of economic downturns. Even in the most dire situations education is not a "crisis" in the way that high unemployment is an economic crisis or an epidemic is a public health crisis. This increases the propensity of education to be pushed down the priority list in favor of these other areas when economic conditions worsen. During times of economic crisis Latin American countries also find that they are unable to borrow to support social spending and instead must reduce provision of these services in order to support the sectors of the economy that remain productive (Wibbels 2006).

Macroeconomic conditions bear some relationship to party ideology through the economic policy preferences of each side of the political spectrum. However, the effect is both slow-moving and imprecise. For this reason, macroeconomic conditions can be considered

[20]The ruling party does have *some* control over the economy, obviously, but even in planned economies, external shocks and international economic conditions are entirely external.

exogenous to party type and a non-systematic factor affecting education policy.

4.3 The Dominance of Convergent Forces in Education Policy

The goal of this chapter is to provide an explanation of the forces that produce the empirical finding of convergence in education between left and right governments. The nature of parties offers a compelling reason to believe this should be the case *ex ante*.

If parties exist to help elect their members to office, then they must adapt to changing political situations if they are to survive. At times this may mean true evolution — conversion to a new policy position. At other times it may mean a pivot — a convergence — on a policy area. The convergent forces described above will necessarily dominate divergent preferences in any case where parties seek survival. Further, if a party goes extinct as a result of maintaining its ideological position, a replacement party could only compete in the electoral space using a different strategy that includes policy convergence in that area.

Not all policies are equally likely to converge. Access policies are most likely to converge because they leave the strongest legacies, face high levels of support from all stakeholders (since nobody loses), and are consistently recommended by experts. Guaranteeing access to schooling is universally accepted as positive and supported by the general public, teachers, business elites, and education experts. Increasing enrollment or completion rates (and correspondingly reducing dropout or repetition rates) involves policies that have no losers — building or staffing schools to increase availability, providing funds to purchase uniforms to reduce barriers, or implement a CCT to encourage attendance are all viewed as win-win policies. Some actors may object to the cost of these programs, but many, especially CCTs, are relatively low-cost (Hunter and Sugiyama 2012). Further, many of the education policies that diffuse are financially sponsored by international organizations like the World Bank. Increasing access often involves the construction of schools, expansion of the bureaucracy, and other structures that quickly become entrenched. At the same time reducing access to

education is a politically untenable position because education is viewed as a fundamental human right (UN General Assembly 1948; World Health Organization et al. 2008; UN 2015).

Quality policies, on the other hand, are less likely to converge. Experts remain divided about the best policies for improving quality of education both generally and which policies are best matched to which circumstances in particular (Busso et al. 2017). As a result, advice is less consistent and more likely to recommend dramatic changes. In terms of both policy legacies and electoral calculations related to stakeholders, the connection with quality policies is also less consistent. Some policies are likely to create entrenched legacies and stakeholders take strong positions, but others are not. For example, a policy that shifts instruction hours to planning hours for teachers may receive a high degree of support from the teachers' unions and may only have to overcome minor legacies to be implemented (including increasing funding to cover the additional hours). In contrast, a policy mandating that teachers undergo periodic review will likely encounter strong opposition from the teachers' unions and significant legacies.

4.4 Conclusion

Political left and right have fundamentally different underlying ideologies; they frequently express different views on education; and they draw on different segments of the voting public to form their electoral coalitions. Yet as Chapters 2 and 3 demonstrate, there exists very little difference in metrics on spending or performance between left and right governments. This chapter argues that the convergence between the two ends of the political spectrum can be accounted for by three primary forces: policy legacies, stakeholder pressures, and expert advice.

Policy legacies create barriers to changes through bureaucratic inertia, creation of political costs, and limitation of the potential policy space. Organized political actors, particularly the teachers' unions and business elites create political pressures for parties on both left and right, although each typically aligns with only one of these groups. Both left and right

also experience pressures from general public opinion on education and a situation in which changes to policy are likely to extract (significant) short-term costs while returning only long-term benefits. Finally, both domestic and international experts recommend identical policies regardless of the ideological identify of the party in power and both left and right are increasingly relying on these experts to craft their education policy.

In the following chapter I illustrate these convergent forces in the case of Chile. There, as my theory predicts, the combination of these three convergent forces dominate the divergent tendency from competing policy priorities of ideologically opposed left and right parties.

Chapter 5

Chile: Convergence in a "Least Likely" Case

Chapters 2 and 3 showed that partisan ideology plays very little role in determining either education outputs or outcomes and Chapter 4 proposed an explanation for this unexpected convergence. This chapter considers the statistical findings and the alternative explanation in light of evidence from Chile. Political left and right in Chile maintain distinct motivations and goals for the education system — the left is driven more by interests in *equity* and the right more by interests in the *growth*. These core principles are tied intimately with their respective electoral blocs and underlying political ideologies. However, both sides are constrained by political forces — policy legacies, stakeholder pressures, and expert advice — that I argue drive policy toward convergence. The policy priorities of each administration help to explain remaining differences between the two parties.

I process trace the role that electoral politics and policy legacies play in Chile through time. Evidence in this chapter comes from a mix of primary sources and interviews collected through six months of field research as well as the secondary literature. The Chilean case demonstrates that even in a polarized context where left and right favor different education systems, political ideology does not drive observed outputs (spending by level or area), or outcomes (enrollment rates, repetition rates, dropout rates, or test scores).

The left's greater focus on equity and the right's on growth helps to explain several observed trends in education policy in Chile. In addition, this framework contributes to an explanation of some unexpected behavior by both sides of the political spectrum. The left's embrace of teacher evaluations, for example, cuts against the interests of the teachers' unions, one of its primary supporters, but was pursued because of the continued reports that low teacher quality was a serious impediment to improving the lowest-performing schools.

The chapter first justifies the selection of Chile as an appropriate case for this test, providing a brief overview of the Chilean party system in doing so. It then reviews the performance of Chilean education on metrics of access and quality, showing that outputs and outcomes have converged since the return to democracy in 1990. The heart of the chapter comes in section 5.3, which process traces education policy and reforms in the modern era, focusing primarily on the period after the return to democracy in 1990.

5.1 Chile: An Extreme Case

Chile can be viewed as an "extreme" case and thus an excellent opportunity to explore a causal explanation, to use the language of Seawright and Gerring (2008). It is extreme in two key ways. First, it is extreme in the degree to which left and right have staked out ideological positions on education. Chile has a long history of a highly institutionalized party system in which ideological parties are differentiated on a clear left–right spectrum (Mainwaring and Scully 1995). These parties have dramatically different visions for the education system. The left has long promoted a system of greater equity and has sided with the teachers' unions in calling for more "democratic" schools.

Parties on the right, by contrast, embrace the neoliberal education system first implemented under the military regime (Gauri 1998, p. 5). This decentralized education system is based on individual choice and the market principles of competition and efficiency. The system operates a nationwide voucher program in which privately run schools are funded with state money and enroll nearly two-thirds of all Chilean students (Centro de Estudios 2017).

Second, Chile is extreme in how salient education is to the voting public. Education is a higher priority issue in Chile than in any other Latin American country. Indeed, in years in which the Latin American Public Opinion Project (LAPOP) asked Chilean survey respondents about national challenges, a higher percentage responded that education was the "most serious problem" facing the country than any other Latin American country in

those years (LAPOP n.d.). Others suggest that in Chilean national polls, education rose from the fifth to the second biggest worry between 2009 and 2013 (Waissbluth 2013, p. 20). Politicians have, correspondingly, paid attention to and participated in the civic discourse on education.

If partisan ideology does not matter in the extreme Chilean context as we would expect, then it is unlikely to matter anywhere. A failure of the prediction in this extreme case suggests that ideology is unlikely to matter in cases where the parties are less divided on education (a constant variable cannot explain a difference in another) or where education is not a salient issue to voters (and we would not expect parties to take or act on extreme policy positions).

5.1.1 Extreme Party Differences on Education

The Chilean Left and Education

The Chilean left is comprised of the Socialist Party (PS) and the Communist Party (PCCh) and other smaller parties such as the Party for Democracy (PPD). At various points the Christian Democrats (DC) have also been part of the left's coalition (as have the PS and PCCh been absent) (Siavelis 2014). The PS and PCCh pull the bloc further to the left than it would be if the coalition were grounded only in the center-left DC. This bloc has gone by the names "Concertación" and "Nueva Mayoría."

Left and right in Chile differ on education in two principal areas: motivating principles and structural vision.[1] The left's motivating principle in education is equity enhancement. It expresses concern about inequality of both education outputs and outcomes. In its view, greater resources should be devoted to creating equality of educational opportunities for all Chilean students. Equally, the left expresses dismay that education outcomes remain highly unequal, linking these results to inequality of both access (opportunity) and quality.

In terms of structure, the left prefers an education system in which the state maintains

[1]The left and right also differ on educational content (curriculum), which is outside the scope of this project.

a greater role (in both school administration and labor conditions) in opposition to the market-based education system put in place under the military regime. Its platform focuses on bolstering public education instead of devoting greater resources to the voucher program and subsidized schools (Bachelet 2007).

The left also prefers a centralized system of education administration. As detailed below, the Chilean education system was decentralized under the military regime, with many administrative powers related to schools transferred to municipal governments. The left voices an opposition to this arrangement, preferring instead to return to a structure in which the Ministry of Education in Santiago has a high degree of control over schools across the country.

Finally, the left also envisions an education system in which all education providers are run as non-profit entities. The Chilean system implemented under the military regime allowed private providers to operate on a profit basis, under the logic that competition and efficiency would improve quality (Chubb and Moe 1990). The left argues, instead, that these schools have contributed to educational inequality and are at philosophical odds with the participatory and democratic education system it prefers.

The Chilean Right and Education

The Chilean right is composed of the Independent Democratic Union (UDI) and National Renewal Party (RN). It has gone by many names, including "Alianza" from 2000–2009 and "Coalición por el Cambio" since 2009.[2]

The right's motivating principle in education is a fundamental concern with *growth*. This vision is intimately tied with its corresponding beliefs about the relationship between the state and economic growth. Specifically, the right favors a limited role for the state and as few restrictions as possible for economic actors (Siavelis 2014). The right also prefers to im-

[2]A full listing of the right pact's names are provided by Siavelis (2014): "Democracia y Progreso, 1989–92; Participación y Progreso, 1992–93; Unión por el Progreso, 1993–96; Unión por Chile, 1996–2000; Alianza por Chile, 2000–2009; Coalición por el Cambio, 2009–present."

plement market principles on the labor side of education, with teacher pay (and employment status) tied to individual level performance.

The RN's policy position is aptly described by then Senator Sebastián Piñera in the debate over the 1992 Teaching Law:

> I want to make known the basic principles which illuminate our participation in this long debate…They are: first, to protect and safeguard educational liberty; second, to be consistent with the principle of subsidiarity of the State on educational matters, which means in this field the State has more obligations than rights; third, to recognize with total clarity the existence of two sectors that participate actively in the area of instruction: the municipal and the private subsidized, planting the fundamental idea that the treatment of both should be equal, in a form that the equality of opportunity is applied not only to the student level, but also to that of the institutions that provide education; fourth, to safeguard and protect basic guarantees for the dignified practice of the teaching career (*Historia de Ley 19.070* 1991, p. 897).

The military regime (1973–1990) implemented the right's preferred educational structures and created a system based on a market economy (Espínola 1992). Schools compete for students and the resources that accompany them and parents are given choice to enroll their students in any school willing to take them. This system creates incentives for educational entrepreneurs to start new schools (Chubb and Moe 1990). The privately run, publicly subsidized schools (*particular subvencionado*) operate under a voucher system and will be referred to here simply as "subsidized."[3] Parents have been drawn to the new schools because they earned a reputation for providing higher quality education.[4]

[3]Under this system, students are allowed to choose any school they wish to attend and a fixed rate "subvention" will follow them to that school, public or subsidized. Despite the apparent freedom, students are limited by practical considerations. Until the passage of the Ley de Inclusión in 2018, schools had the ability to limit enrollment through several mechanisms. The elimination of these barriers is discussed in greater detail below in section 5.3.6. In addition, as one teacher explained it, the variation in school quality happens between municipalities, not within them, so for most students the distance to the nearest quality school district is so great that there is no real choice (Anonymous Interview 2 2017).

[4]Although early studies suggested that the subsidized schools outperformed their public counterparts, later analyses dispute this claim (see, e.g., Bellei 2007; Hsieh and Urquiola 2006). Selective admission practices at subsidized schools created false comparisons and an illusion of higher performance and resulted in stratification across schools *within* each type of school (Mizala and Torche 2012).

The degree to which this system is privatized is *the* defining element of the Chilean education system. Today, over 62% of all primary and secondary students attend either a fully private or a publicly subsidized private school (subvencionado) (Centro de Estudios 2017). Figure 5.1 illustrates the growth of these schools over time.

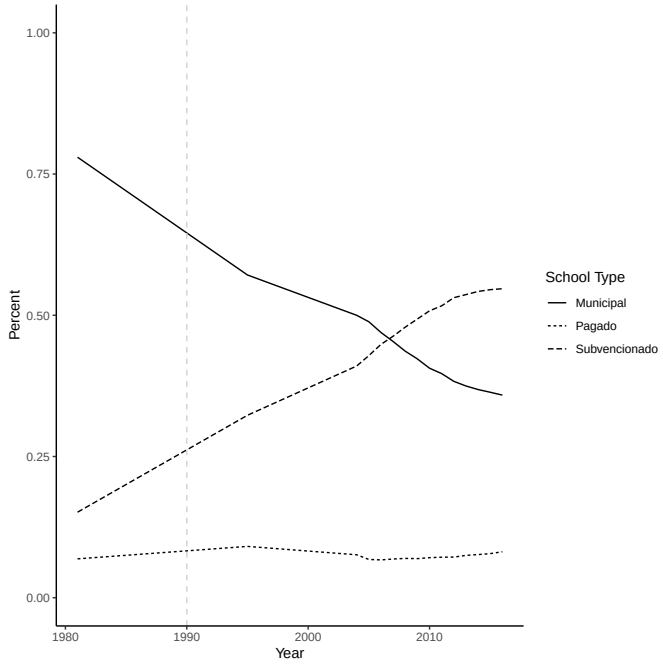

Figure 5.1: Growth of subsidized schools over time. Percentages calculated based on data from Cox et al. (1997) and Centro de Estudios (2017).

Although the subsidized school system was established under the military regime and the upward trajectory of subsidized schools began before the return to democracy, it was only under the democratic administrations of the Concertación did those schools capture a majority of the education market. Section 5.3 provides detail about *why* this expansion happened.

5.1.2 Extreme Salience of Education to the Public

For education to matter in Chilean politics, voters need to care about the issue regardless of party positions on education policy. Does education then matter to voters in Chile? In a word, yes. As noted above, the Chilean public is much more likely to list education as

the most important problem facing the country than their peers in other countries across the region (LAPOP n.d.). Across all available LAPOP data, 4.0 percent of respondents rate education as the *most important problem* facing the country.[5] Further, polls showed that by 2013 education had become the second biggest worry for Chileans (Waissbluth 2013, p. 20).

Beyond polls, Chileans have demonstrated the salience of education through other channels. Chilean students participated in mass demonstrations and protests in 2006 and again in 2011–2013 to a degree seen in few other cases. The demands of the students varied between the two instances of unrest and both involved a large number of students too young to vote.[6] Yet in both cases, public opinion followed the student demands closely. At least one survey conducted at the height of the 2006 protests suggested that 69% of those surveyed supported the student movement generally and the same percentage were in favor of the methods (strikes, occupations) used, while only 25% were opposed (Gálvez 2006). This series of events suggests that the Chilean public demonstrates its interest in education in ways beyond the ballot-box, making the issues salient for politicians even in non-election years, and that politicians feel obligated to respond.

Chilean parties actively discuss education in public discourse and presidential candidates continue to make education a highlight of their campaign platforms. Thus, if parties respond to electoral pressures, there is every reason to expect that political ideology matters for education policies in Chile, which should have some effect on outputs and outcomes. If it does not matter, in a case where education is politically salient and the two ends of the political spectrum have such divergent beliefs about education, then it stands to reason that ideology will not matter anywhere. This is the case — there is no evidence that partisan ideology is the driving force behind either spending levels or upward trending progress on most education outcome metrics. On the other hand, there is an abundance of evidence that

[5]Although this value may seem small, consider other responses to the same question — the economy: 3.5%, inequality: 5.1%, and security: 0.2% (LAPOP n.d.).

[6]The 2006 protests involved primarily high school students (most of whom are under 18, the voting age in Chile), while the second round of 2011–2013 were focused more on university students.

policy legacies, stakeholder pressures, and expert opinions play an important role shaping the policies that determine education outputs and outcomes.

5.2 Education Performance in Chile

Chile tends to outperform its Latin American peers on a wide range of outcome metrics but under-perform compared with countries at similar levels of development in other regions. Of the 70 countries that took the 2015 PISA test, no Latin American country was in the top half (Bos et al. 2016). The highest ranked country, Chile, scored 44th overall, just behind Slovakia and Greece (ibid.).[7] On metrics of outputs and outcomes, Chile follows the patterns described in Chapters 2 and 3: the left and right spend on education at similar levels and distribute education resources in similar ways. Metrics of access (enrollment, completion, dropout, and repetition) and quality (test scores) also show a convergence between left and right.

5.2.1 Education Outputs in Chile

How has the Chilean government spent its education budget? Figure 5.2 shows overall spending and spending by level for the period 1997–2015, when data is available as well as spending by area over the same period. The overall spending level has remained moderately flat, with a slight upward trend. The moderate increases that do occur, happen during the 1997–2004 and 2012–2015 periods. The former corresponds to a period of left executive control and the latter to an executive on the right.

[7]The absolute highest Latin American scores come from Argentina (38th overall), but are based solely on schools in Buenos Aires and are thus not a fair comparison with the other countries where the test is administered across a complete sample of schools. Also note that the Dominican Republic takes the lowest place in these rankings and Brazil and Peru also score in the bottom 10% at 63rd and 64th, respectively.

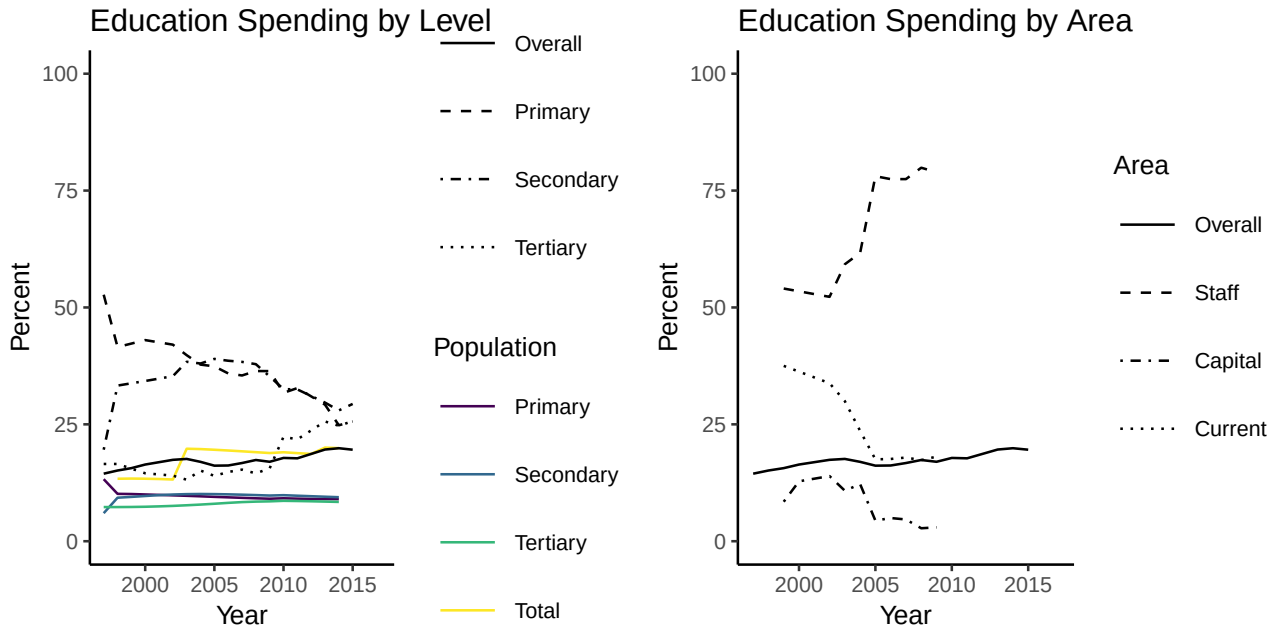

Figure 5.2: Chilean Education Spending. Left plot shows spending by level, right plot shows spending by area.

As a percentage of the overall education budget, spending by level changed dramatically over the observed period. The changes mostly occur under the watch of the left, suggesting that partisan ideology cannot explain differences here.

During the early part of this period (1997–1998) secondary education spending jumped significantly and primary spending fell. By 2006 secondary spending surpassed primary and the two levels are funded at nearly equal, but decreasing rates thereafter. Changes in enrollment are insufficient to explain these shifts. The changes occur concurrently with an important change in education policy: the move from a half-day to a full-day in 1997. However, because this change occurred at both the primary and secondary level it cannot explain the change in distribution of resources.

The left hand plot also shows the school-aged population as a percentage of the entire population. The Chilean population is aging over this period, with primary and secondary-aged students representing smaller percentages of the population and a corresponding increase in the percentage of tertiary-aged students. However, these changes are fairly gradual and

cannot explain the magnitude of the changes in spending.

The trends in education spending — increasing proportions being spent on tertiary education and decreasing proportions on primary and secondary — continue under right-of-center administrations beginning in 2010 and by 2015 all three levels were funded at nearly equal levels.

The available data in the right panel of figure 5.2 is more limited for areas than for levels, but an important trend emerges nonetheless. During the period 1998–2009, staff expenditures grew dramatically, while current and capital expenses fell. By the end of the observed period capital expenses represented just a tiny fraction of the overall government education budget, while staff expenditure topped 75%. The increased length of the school day would predict a rise in these costs, but the timing does not align as expected — we would anticipate those expenses to rise immediately but we observe a lag of several years. This points again to a political process as responsible for changes to education outputs.

5.2.2 Education Outcomes in Chile

Access

Figure 5.3 shows the adjusted net enrollment rate (ANER), completion and transition, repetition, and dropout rates over the past decade, respectively in each subplot.[8] ANER at both the primary and secondary levels has fallen slightly at both levels. All completion and transition rates have remained high, although there is year-to-year variation. Repetition rates show low numbers that are trending slightly downward.

Note that in the upper left subplot the data source changes for secondary education in 2011. The Ministry of Education (Mineduc) reports numbers at irregular intervals from 1990 to 2011 while the World Bank has continuous annual data from 2007 to 2015. In years where the two sources overlap, the World Bank estimates are consistently and significantly higher

[8]Note that I include the effective transition rate (ETR) on the sample plot as the completion rate because the two are so closely linked.

for secondary education than those from Mineduc, suggesting that the jump may not be as great as it appears.[9]

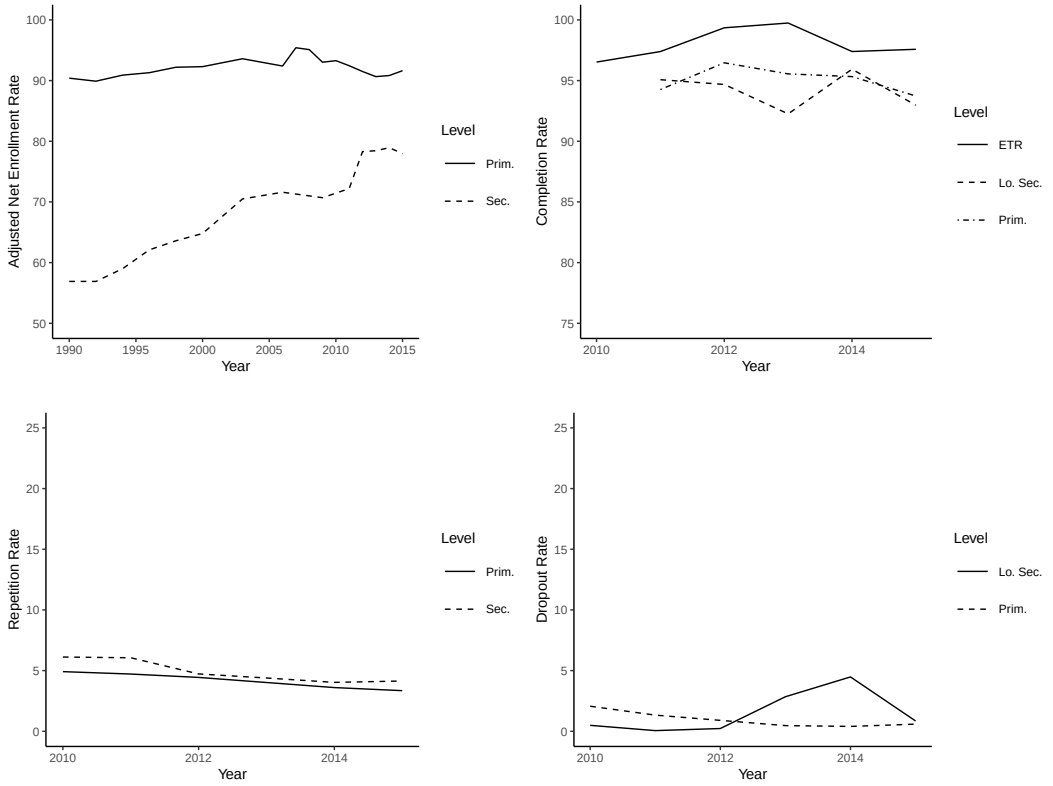

Figure 5.3: Outcomes in Chilean Education. ETR is the primary–secondary effective transition rate. Note that the scale of the y-axis varies between plots.

The top right plot shows the dropout rate at primary and lower secondary. The primary dropout rate has declined very slightly, while the lower secondary rate has increased. It is possible, however, that the spike in dropout may be just that — a temporary spike. The combination of these results suggests that the Chilean education system is performing well on many traditional outcome metrics.

[9]It is not entirely clear what drives the differences between the two sets of reported numbers, but a likely explanation is a difference in the definition of the relevant population for secondary education, with the World Bank using a wider age range, thus inflating slightly the estimates for ANER at the secondary level.

Quality

Figure 5.4 looks at secondary level test scores, as reported by Altinok, Diebolt, and De Meulemeester (2013). The upper left plot shows that test scores have risen across the board after falling briefly at the start of the century. Equally, the upper right plot shows that the percentage of students achieving the lowest level of competency has also risen across the board after a brief dip. The lower left plot shows a slightly different trend with the percentage of students achieving the highest level of proficiency.

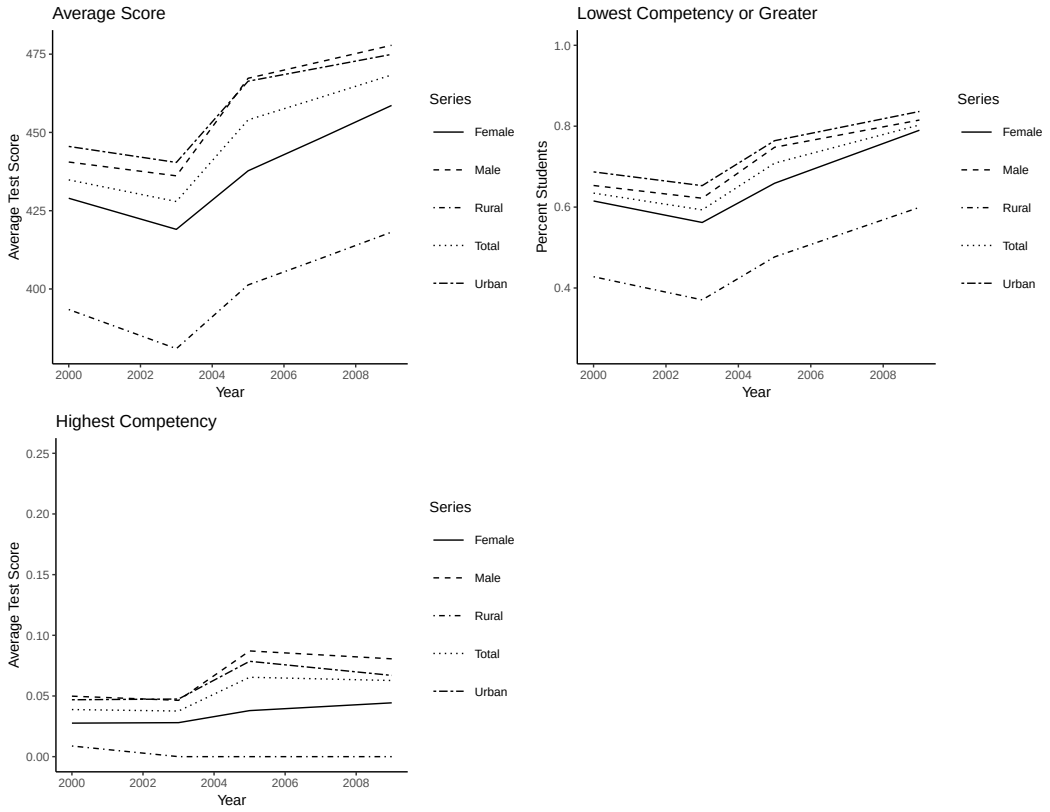

Figure 5.4: Chilean Secondary Test Scores. Note that the scale of the y-axis varies between plots.

Figure 5.5 presents results in the Chilean national standardized exam, the Education Quality Measurement System (SIMCE). This exam is administered annually to all students at the corresponding levels. This provides a more comprehensive test instrument and one more tailored to the instruction that Chilean students receive than international tests. Most

of the test scores suggest an upward trend followed by a recent decline in scores. The exception is mean secondary math scores, which declined, then climbed, and then fell again.

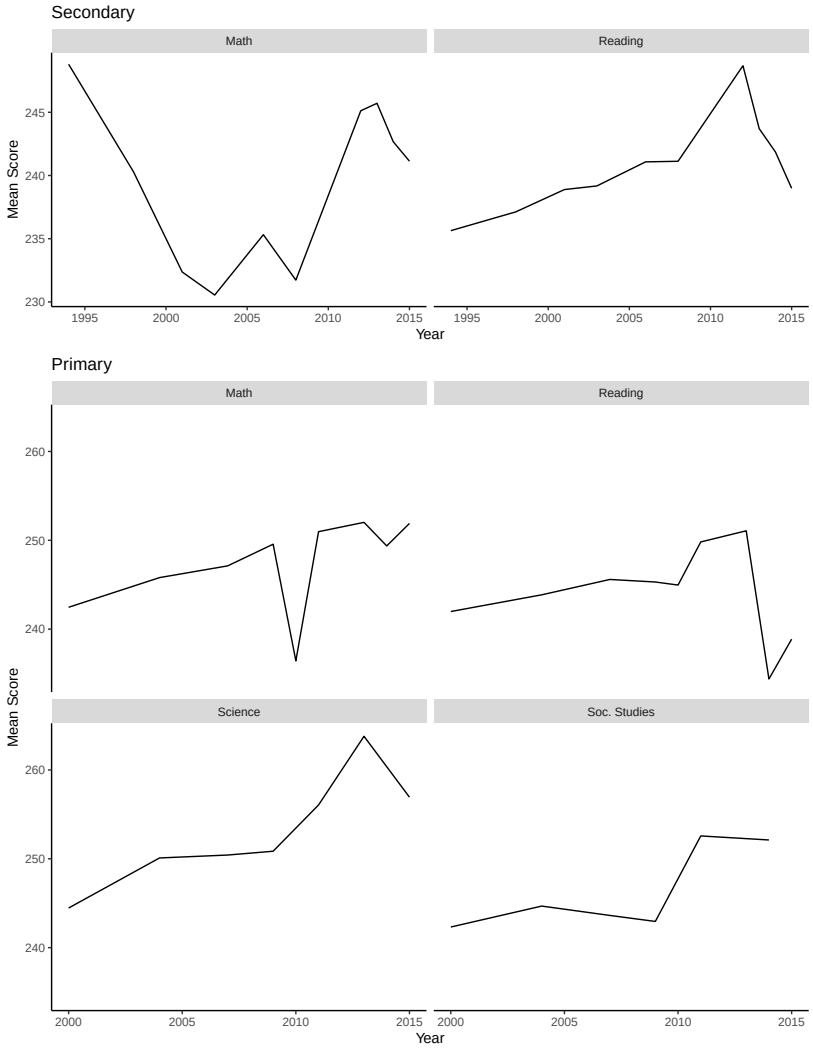

Figure 5.5: SIMCE Test Scores. Primary and secondary scores reported are from the eighth and second years of each cycle, respectively. This corresponds to the final year of primary education and the second of four years of secondary education.

Equity

Assessing equity in Chilean education is more challenging. Observers frequently complain that the system is inequitable and reinforces existing inequalities (see, e.g., El Mercurio 2012b). The data presented here confirms that equity remains a problem but also identifies

some signs that Chilean education has become slightly more equitable over the past decade.

I measure equity in education along three axes in Chile: gender, geography, and income. The additional analysis of geographic and socioeconomic equity is possible looking at Chile because of greater data availability than at the regional level. In Chile and across Latin America generally a major divide exists between urban and rural areas in terms of both access and quality of schools. Education is much more costly in rural areas, where there are fewer economies of scale and students must travel greater distances to attend school (White and Tweeten 1973; Fox 1981; DeYoung and Howley 1990; Bard, Gardener, and Wieland 2006). Gender differences are exaggerated in rural areas, where traditional values still emphasize male education over female and girls are more likely to be kept at home to help with domestic labor than boys (Alderman et al. 1996). Further, it is a challenge to attract high quality teachers to rural areas (Monk 2007) and to provide them with professional development (Murry and Herrera 1998). Even in the more developed Chilean context it is worth considering equity between urban and rural schools.

Equity in schools based on economic factors continues to be a perennial problem not only in Chile, but across Latin America in general. Schools that serve poor students tend to struggle for a variety of reasons: students enter school with a social and academic capital deficit (Lee and Burkam 2002; Aikens and Barbarin 2008) that continues to build throughout their education (Ready 2010);[10] parents in these schools are less able to provide academic support for their children (Jencks and Mayer 1990); students are more likely to be absent (Ready 2010); and school budgets are lower and social capital accumulates more slowly (Bénabou 1996). Further, it is difficult to recruit high quality teachers to teach in struggling schools. Economic inequity correlates with the geographic divide. Indeed, persistent poverty is one of the challenges that rural schools face (Howley, Rhodes, and Beall 2009).

In terms of gender differences, Figure 5.6 shows that the primary level enrollment and

[10]Note that research shows that early childhood education gives students an early advantage and likely an advantage later in life, but that the advantages temporarily disappear by late elementary and early high school (Currie 2001).

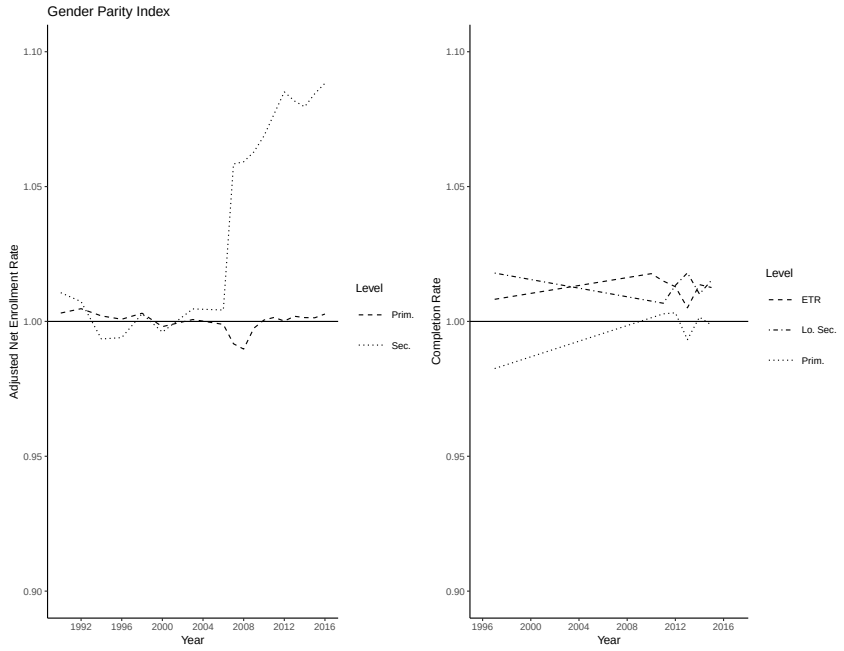

Figure 5.6: Gender Parity Index for Enrollment and Completion. ETR is the effective transition rate from the primary to lower secondary levels.

completion rates are at near parity for boys and girls. A meaningful inequality in both still exists at the secondary level, where girls outperform boys (as indicated by the ratio > 1). In fact, the GPI for secondary ANER had been near parity, but grew dramatically starting around 2009.

Looking further at gender differences, refer again to figure 5.4. The gender gap increased and then decreased for average test scores, percentage of students achieving at least the lowest level of competency, and percentage of student achieving the highest competency. The improvements here are the result of increased performance by girls and not decreased performance by boys. In the first two measures, boys and girls have both grown, with girls making greater gains. The exception is at the highest level of competency, where performance by boys has stagnated or even declined slightly over the past decade.

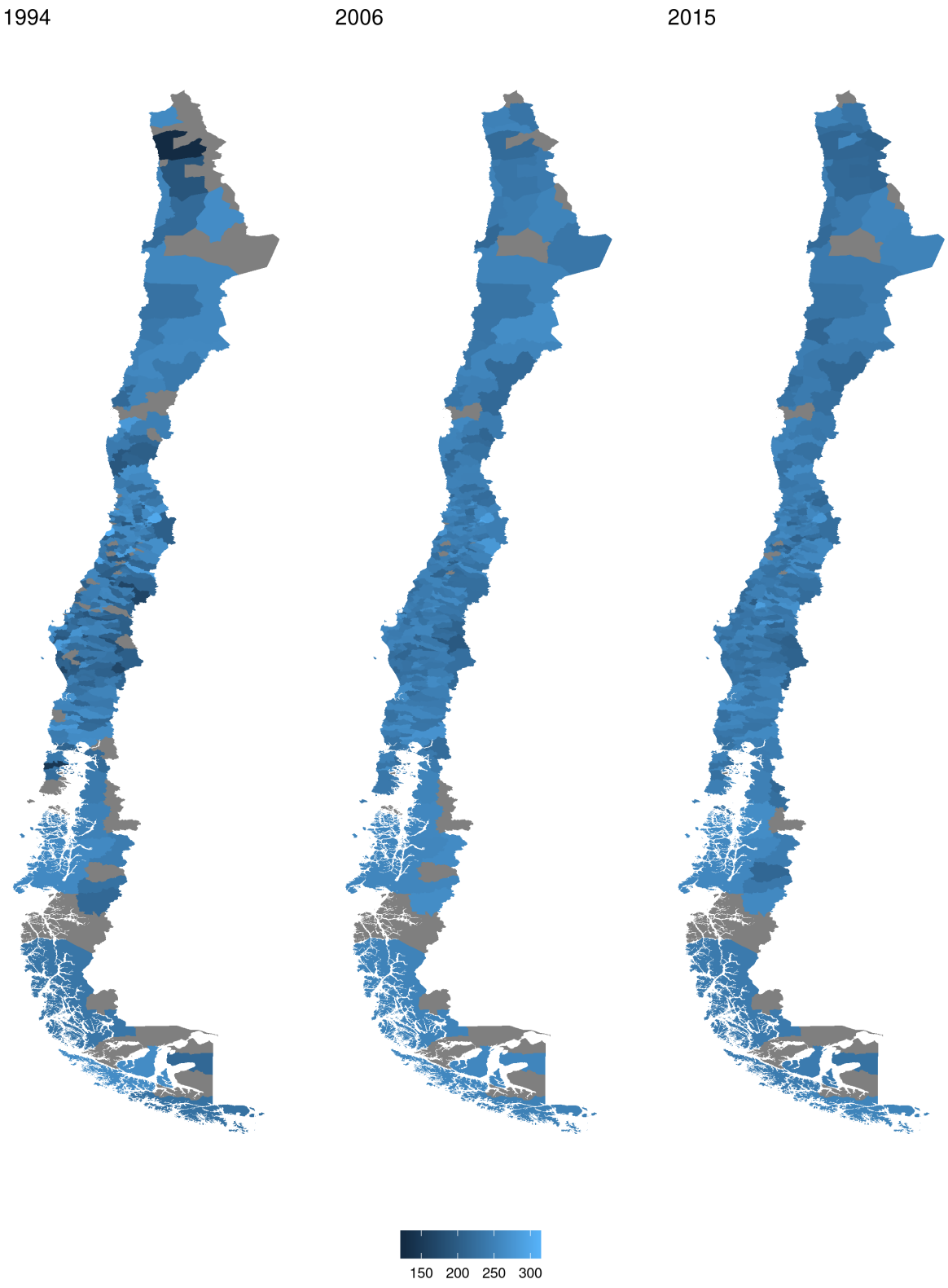

Figure 5.7: Variation in mean SIMCE reading scores

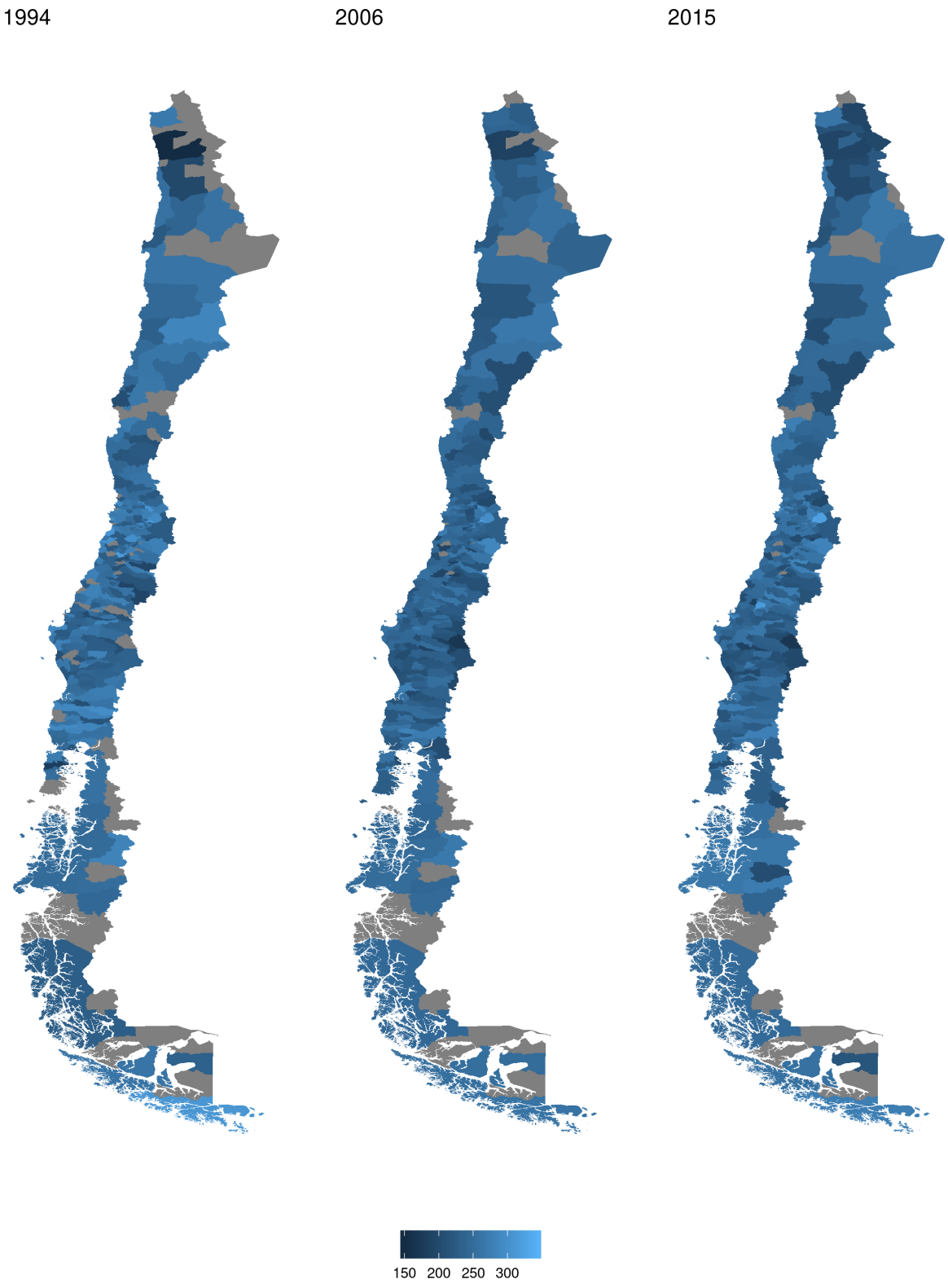

Figure 5.8: Variation in mean SIMCE math scores

In terms of geographic inequality, Figures 5.7 and 5.8 show changes in SIMCE reading and math scores, respectively, over time throughout Chile. They provide evidence that the rural areas performing the lowest in 1994 did, in fact, improve in both the 2006 and 2015 assessments. In a more systematic comparison, Figure 5.4 also shows that rural students still lag behind their urban peers. The gap in average test scores and percentage of students achieving the minimum level of competency has been shrinking after a brief period of expansion. However, in the measure of percentage of students attaining the highest level of competency, urban students improved performance significantly before stagnating and even declining. Rural students fared worse, with performance sinking and staying at near 0 levels.

In terms of socioeconomic equity, I use data from the Chilean National Performance Evaluation System (SNED) as a proxy for school quality. Using SIMCE data here is not possible because it does not contain any variables that can be used as proxies for socioeconomic status. Figure 5.9 shows overall performance over time by level, urban/rural divide, and homogeneous group.[11]

These figures collectively illustrate that equity remains a problem, as critics have noted, although there are some signs that equity has increased slightly along gender and geographic dimensions. The most persistent inequalities in education outcomes remain along socioeconomic lines.

5.3 Convergence in the modern era

Chile's modern era begins with the return to democracy in 1990, when the center-left Concertación coalition won the presidency and held it for the next two decades. Policy legacies, stakeholder pressures, and expert advice have pushed left and right toward convergence. Policy priorities based on ideological positions remain a force for divergence, but each successive administration finds that the convergent forces limit their ability to act on these preferences.

[11]Chilean schools are organized into "homogenous groups" for comparison in the SNED. Schools are compared against peer institutions categorized by: geographic zone, size, and type.

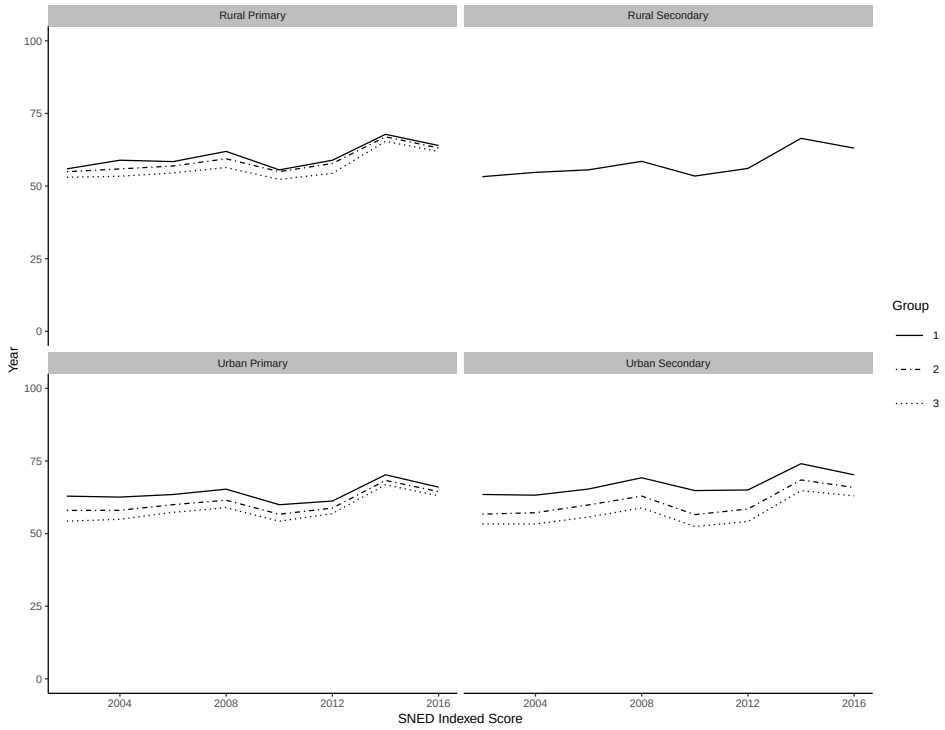

Figure 5.9: Overall SNED Performance by Homogeneous Group

Left and right have converged on education policy in several important regards. With respect to policy on outputs, both support similar levels of education spending by the state; and both have accepted that state *and* subsidized schools will play an important role in the provision of Chilean education. With respect to policy related to outcomes, both favor expansion of access to early education as well as higher education; both embrace teacher merit pay; and both have voiced support for greater equity by improving the lowest performing schools and decreasing financial barriers to entry into higher education. Although we observe convergence overall, there is a difference in the *degree* of support by the parties on some of these issues. Convergence is not equivalent to conversion, as detailed in Chapter 4 — convergence is the observed condition of identical policies under different parties and conversion is the shift of underlying policy ideal points. Convergence in Chile varies between mere acceptance, as with the right and the elimination of a tuition co-pay in subsidized schools, to advancing alternatives without gutting the status quo, as with the left and support for

public versus subsidized schools.

This section process traces the political and non-political factors that drive observed convergence. I first provide a short outline of the evolution of education policy from the founding of the Chilean Republic until Salvador Allende's overthrow in 1973 and the period of military rule that followed from 1973–1990. These brief sections provide important background that shaped the policies after the country returned to a democratically elected government in 1990. The first three administrations in the modern democratic era (Patricio Aylwin, 1990–1994, Eduardo Frei, 1994-2000, and Ricardo Lagos, 2000–2006) constitute a period of status quo without any major changes to the education system. The center-left instead pursued a gradual shift toward greater equity through small targeted programs. Michele Bachelet's administration (2006–2010) represents the first significant changes to Chilean education, brought about as a result of student protests, but with limited real changes. Her second administration (2014–2018) was characterized by massive changes to education, rolling back many of the fundamental aspects of the system implemented under the military regime. The left was able to accomplish this because of weakened policy legacies due to the passage of time, shifted stakeholder pressures, and a willingness to ignore expert advice. Sebastian Piñera's two center-right administrations (2010–2014 and 2018–present) are also primarily status quo in education, limited by the legacies of the left.

Table 5.1 outlines the changes in parts of the education system from 1973 through today. Blue indicates leftist ideal policies, red indicates rightist ideal policies, and purple indicates policy that falls between the two extremes. The table traces the evolution of education policy across nine dimensions related to education outcomes. In terms of access, it considers copayments and selection practices in subsidized education — do these practices exist and in what ways are they limited; and university tuition — who pays and how. In terms of quality, it looks at the voucher system — how closely tied are payments to enrollment; decentralization — to what degree is control centralized; merit pay — how are teachers evaluated and rewarded for performance; the teacher statute — in what ways is the teaching

profession regulated; and profit — are schools allowed to exist as for-profit entities. The table also notes additional projects which fall outside the scope of these dimensions.

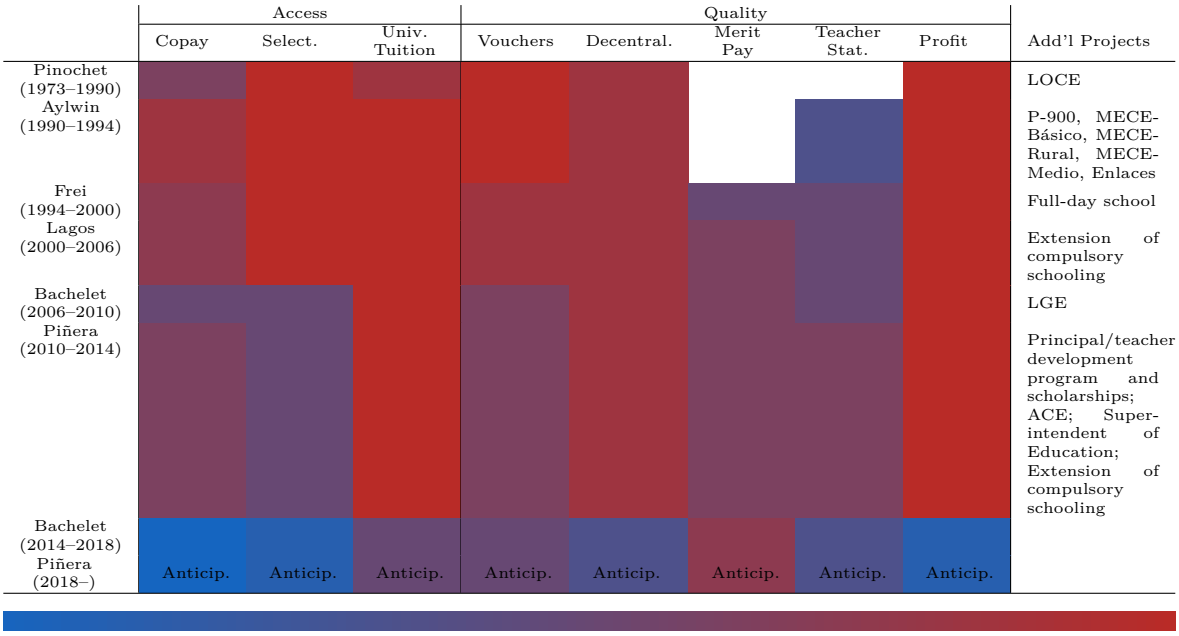

Table 5.1: Evolution of Chilean education policy. Colors represent the state of policy at the end of the corresponding administration. Blank cells indicate areas in which no policy existed.

The overall trend is from a "deep red" system to a "purple" one, but some exceptions exist. For the first two decades after the return to democracy, the center-left found that it could do little to change the structures that define Chilean education and instead pusued smaller side projects that attempt to address issues of inequality in small, uncontroversial ways. The system becomes more red on a few dimensions even under the Concertación. Michelle Bachelet also managed to move the system toward truly "blue" policies on a few dimensions and it appears that these changes are likely to persist through Piñera's second time in office. The table also shows the left was able to implement directly moderate or left-leaning policies in areas where no previous policy existed compared to the more gradual changes in other areas.

5.3.1 Democracy Pre-1973: An Early Start in Education, then Radical Proposals

The Chilean public education system got an early start compared with many other Latin American nations. Free primary education was established by 1813 (along with the first set of regulations for schools and teachers), and Chile became the first country in the region to provide education for girls (Cox et al. 1997). The next century of Chilean education, however, saw little further development beyond an expansion with a growing population. During the 1920s the government attempted a series of reforms aimed at modernizing and advancing this outdated education system, although some of the proposals were too radical for Chilean society at the time (ibid.). Early in this period the seeds of competing ideologies about the degree of centralization in the education system emerged, with the left moving toward a more centralized system and the right preferring one that enforced a stricter subsidiarity principle and allowed schools and municipalities to maintain high degrees of control (ibid.). This education system could be, "characterized by strong State power, centralization of school administration, with teachers' unions having an important influence and teachers having great autonomy over teaching practices" (Bellei and Vanni 2015, p. 194). Still, it was a system that had been developed under both left and right and was not designed to conform to any single political ideology. The history of quality, expanding access, and a constant eye toward reforms while simultaneously staying grounded in tradition, formed the basis for most of the education politics prior to Allende's proposals.

After a century of moderate reforms conducted at a slow pace, the administration of Eduardo Frei (1964–1970) took dramatic steps to modernize the education system. These changes addressed access: increased school capacity and reduced barriers to entry through the provision of free school lunches and uniforms; quality: increased teacher training for those already in the profession and more years of schooling at the primary level; and equity: a delay of four years (from sixth to tenth grade) in the decision between technical and university-track programs (Farrell 1986). Despite the scope of change, the reforms had general public

support since they were drafted in consultation with stakeholders, stayed well within the bounds of normal politics, and were sold as a foundation for education for the foreseeable future. These reforms generated a number of successes, particularly for the urban poor, but were criticized by some on the left who felt they did not go far enough in changing societal structures they viewed as contributing to persistent inequality and poverty (Farrell 1986).

In 1970, Salvador Allende was elected to the presidency. As a socialist who won only 36% of the popular vote, he faced a high degree of opposition from the moment he was elected. Despite lacking a clear mandate, the newly elected government moved quickly to implement a radical agenda that included, among other things, education reforms more extreme than those passed under Frei.[12] The extreme nature of the education proposals and the lack of time since the previous round of reforms were only two of several mistakes that doomed the agenda to failure.

The proposed reforms, titled the "National Unified School" (ENU), included socialist language that alienated both the conservative and moderate sectors of society. Early in the document, for example, the proposal states, "the strategic perspective which illuminates the new educational policy assumes the construction of a humanistic socialist society" (Ministerio de Educación 1973, p. 70). Much of the document focuses on sweeping statements about "humanistic socialism," but among the substantive policy proposals, the document called for the complete abolition of the traditional divide between technical and academic tracks in schools (Farrell 1986, p. 162). Yet even this was a compromise with the radical factions of the coalition, who were emboldened by the surprise election of Allende, and believed that the proposed reforms did not go far enough in changing the system. Thus, no actors were pleased with the proposals. Moderates viewed it as too extreme; radicals viewed it as too centrist; parents and teachers viewed it as rash, too soon, and proposed in a disorganized fashion (ibid.). These proposals were never enacted because of the military coup.

[12]The most radical proposals under Allende included significant land reform that generated fears among the wealthy and triggered a swift response from the elites and their American allies.

5.3.2 Military Regime 1973–1990: A Neoliberal Education System and Focus on Efficiency

- **Copayment**: Basic system of copayment with low caps (1988)
- **Selection**: Schools allowed to engage in selection practices (1979)
- **University tuition**: Public loans available to students (1981)
- **Vouchers**: Established payment based on strict connection to student enrollment levels (1979)
- **Decentralization**: Significant decentralization (1979)
- **Merit Pay**: None
- **Teacher statute**: Eliminated separate teaching statute and moved teachers under general labor law
- **Profit**: Private and subsidized schools allowed to exist as for-profit entities (1979)
- **Additional Projects**: Comprehensive education law codified the system — LOCE (1990)

The Chilean military staged a coup on September 11, 1973 and held power for the next 17 years.[13] During this time, Chile became a national experiment in neoliberal policies only previously hypothesized by Milton Friedman and his Chilean students, the "Chicago Boys." This theory, as applied to education policy, included recommendations to privatize and decentralize education and rested on a fundamental belief about efficiency in schools and the market's ability to increase that efficiency (Chubb and Moe 1990).

The neoliberal changes came to education in 1979 when the military moved to implement the market-based education system.[14] This system would be decentralized, privatized, and operate on the market principles of competition and choice. The economists argued that competition by publicly subsidized schools would naturally lead to higher quality and

[13]The military originally ruled with a junta government, headed by four chiefs (one from each branch of the military) who were supposed to rotate control as chair of the junta, but Augusto Pinochet quickly moved to become the sole leader of the country.

[14]The military government made changes to education within a month of seizing power. These early reforms, however, were mostly confined to curriculum and changes in specific school leadership.

increased efficiency of education since parents would be able to choose schools for their children, thus creating an incentive for schools to find ways to increase quality (to attract students) and efficiency (to increase profit margins) (Chubb and Moe 1990). Chilean education in the 1980s can, as a result, be described as an era focused on *efficiency* (Cox and Lemaitre 1999). Further, funding for public schools was set at equal levels (based on enrollment) to the new private subsidized schools so as not to give them an advantage in this nascent competition. In announcing the changes, Pinochet made clear that the state's role in education was concentrated at the primary level and that "where the role of the state ends, the market's begins" (Corvalán and García-Huidobro 2015, p. 1).

The process of decentralization began in earnest in 1979 in conjunction with the establishment of a state subsidy that would be paid per student, regardless of whether the institution was public or private.[15] Some inside of the ministry of education today argue that these changes were completely ideological and political — no thought was given to how these changes would affect the provision or quality of education but were pursued in order to fragment the teachers and reduce their organizing capacity (Anonymous Interview 5 2017). The decrease in the total number of teachers suggests increased efficiency as expected by the underlying theory. However, the political impetus behind the changes also resulted in an organization system that was neither optimal nor always logical, creating new inefficiencies that persist today (Anonymous Interview 7 2017).

The process of decentralization was incomplete even after seven years of transferring authority to the municipalities to the point that, "Chilean policymakers, society, and even the courts continue to believe that it is the [national] ministry that is effectively running the municipal schools" (Gauri 1998, p. 28). There are at least three reasons for this incomplete transfer of power. First, education plays a central role in citizenship formation and the

[15]The first schools were transferred from centralized control in Santiago to the municipalities in 1980, but the process was halted temporarily in 1982 and not completed until 1987. An economic downturn created a budgetary crisis that limited that limited the government's ability to pay the teacher severance that would result from the transfer, causing the delay (Gauri 1998).

military government did not want to cede all power in this regard. Second, the theory of decentralization suggests that local levels of government are better suited to dealing with many problems because they can capture more fine-grained variation and match solutions to specific problems. However, the history of military rule meant that local governments had only limited capacity and did not necessarily have access to better data or the ability to act on it when available. Finally, under Pinochet, municipal mayors were military leaders appointed to the positions. As members of the military, they were used to following commands from above and expressed no desire or ability to exercise individual initiative in education even after they had been given the legal authority to do so (ibid.). Both limited capacity and an unwillingness to take risks meant the central education authority was forced to retain some powers and contributed to confusion about who was in charge.

The final round of major changes to the education system took place in the last few days of the military regime in 1990 with the passage of the Organic Constitutional Education Law (LOCE).[16] This law cemented the market-based system and simultaneously gave the national Ministry of Education important powers that would serve as the basis for the new democratic regimes to improve quality and enhance equity in Chilean schools.

Finally, at the university level, higher education also underwent neoliberal reforms under the military regime. Free universal tuition was eliminated and replaced with a system of government-backed loans and universities gained new autonomy in their administration (Disi 2018). These 1981 reforms also reorganized many of the post-secondary non-tertiary (technical) education options in the country (Muga 1990).[17]

To summarize, the roots of partisan divides over education can be traced back over a century. Not until the Allende government, however, did education policy move into an overtly ideological space. Although Allende's proposals failed to be enacted, let alone implemented, the military regime's reaction was a strong move in the opposite ideological

[16]The proposal became law on the *final* day of the military rule.

[17]Although these changes had important impacts on the education system, this type of education is beyond the scope of this project.

direction, not a mere return to pre-Allende policies. Thus with the return to democracy in 1990, the newly elected left of center government found it had a semi-decentralized system, fractured between public and subsidized institutions, in which teachers were held in very low regard and paid accordingly. Although the military had surrendered power peacefully after losing the plebiscite, the specter of another coup loomed large in the mind of all politicians.

5.3.3 Aylwin, Frei, and Lagos, 1990–2006: Status Quo with Targeted Equity Programs

- **Copayment**: Slight rightward shift, followed by slight leftward shift. Allowed *public* secondary schools to charge a copayment and increased cap on copayments (1993); introduced system of scholarships to cover copayment for poorest students (1997); restricted mandatory copayments from being applied to low-income students (2004)
- **Selection**: No change
- **University tuition**: Slight rightward shift. Increased loans to students
- **Vouchers**: No change
- **Decentralization**: No change
- **Merit Pay**: New moderate program. Implemented a school-level merit pay system (1995)
- **Teacher statute**: New slightly left-of-center program. Enacted for first time since military coup (1991)
- **Profit**: No change
- **Additional Projects**: Quality programs focused on lowest-performing schools — P-900 (1990), MECE (Básico, Rural, and Medio) (1990), move to a full school day (1997), Enlaces rural school technology program (1992), extended mandatory schooling to 12 years (2003)

The center-left Concertación coalition won the presidency in the first democratic election and continued to hold it for the next two decades. The first three administrations during this time — those of Patricio Aylwin, 1990–1994, Eduardo Frei, 1994–2000, and Ricardo

Lagos, 2000–2006 — can be characterized largely as status quo administrations that held ambiguous positions toward education policy and used small targeted programs to address concerns about equity. I present these three administrations together because of the high degree of similarity in the approach to education under the three presidents, even though Aylwin and Frei, both Christian Democrats, were more centrist than Lagos, a socialist.

Three competing drives characterize the ambiguity of the center-left's position on education during this period: one in which the three administrations maintained the status quo, another in which they moved *rightward* on policy, and a third in which they made modest leftward shifts. Maintenance of the status quo is, by far, the dominant trend of the three. No changes were made to policies related to school selection, decentralization, or profit in education. There was slight movement toward more conservative policies in university tuition and the copay system under Aylwin. These reforms reflect the center-left's movement toward convergence with the right's commitment to education choice (Gauri 1998). The center-left also implemented for the first time a merit pay system for teachers. Merit pay is more in line with the right's vision for education than the center-left's, but the Concertación (in consultation with the teacher's unions) designed a moderate system. The Frei and Lagos administrations shifted left slightly on the voucher system and reversed course to moderate slightly the copay reforms implemented under Aylwin. The center-left also re-implemented a separate teacher statute that was slightly left of center and over the course of the three administrations pursued a series of small targeted programs that shifted focus gradually from efficiency toward equity (Cox and Lemaitre 1999; García-Huidobro 2000).

Policy Priorities

All three presidents campaigned on promises of prioritizing education. Aylwin promised to address educational deficiencies (Gauri 1998), Frei to continue the policies of Aylwin, and Lagos to focus on equity (Weinstein 2017). Once in office, however, the priorities of the three governments were more ambiguous.

Aylwin began his tenure by appointing Ricardo Lagos as Minister of Education. The appointment signaled the importance of education to the new administration because Lagos was, apart from Aylwin, the most prominent politician on the left at the time and consequently brought with him a great number of resources that otherwise would not have been available to education reformers (Weinstein 2017).[18] As important as education was to the new administration, however, it was not the top priority, economic concerns took precedence.

The policies of Minister of Education Lagos became the policies of the Aylwin government. The appointment of Lagos, a socialist, as the Minister of Education pulled the education policy of the center-left Aylwin (a member of the DC) further to the left than it would have been otherwise. Lagos pushed for a new teaching statute, higher teacher pay, and a general increase to education funding.[19] The Teacher Statute was a top priority and would treat teaching as separate from other labor, enhance job security, and guarantee a minimum pay for teachers. The new law effectively made it impossible to either fire a teacher or move staff from one school to another, regardless of changing enrollment needs and raised guaranteed minimum salaries (Cox et al. 1997). These changes were largely welcomed by the unions, which had long desired such a law, even if many teachers still felt that it had not gone far enough (Gauri 1998). The guarantee of minimum salaries cut into the neoliberal logic that strictly tied school budgets to student enrollment but also strengthened the decentralized nature of the system by bolstering the power of municipalities in administering schools (ibid.). Yet a year after implementing the Teacher Statute, the Aylwin government floated a proposal to retract some of the job security protections of the Teacher Statute they had just passed (ibid.).

Funding for subsidized schools is another area in which the Aylwin administration exhibited ambiguous policy priorities. The military regime established a system of copayments

[18]Previous research has shown that devoting human capital to education is both one way to show that it is a priority and an effective way to produce results (Apfeld and Liu 2019).

[19]Lagos was both a true supporter of high quality education and a savvy politician. The policies he pushed served his own political ends by appealing to future constituents and setting the stage for his later bid for the presidency (Gauri 1998; Mizala and Romaguera 2004).

in 1988 (financiamiento compartido). This system allowed subsidized schools to charge students fees to supplement the state subsidy, but the fees were capped at a relatively low level and only allowed at subsidized schools. Aylwin enacted the RN's proposal to expand these copayments to public secondary schools (provided that they were "voluntary"), increase dramatically the cap on the fees,[20] and establish a system for discounting the subsidy based on the level of the fees in such a way that copayments were encouraged (BCN 2014). This change is a clear entrenchment of the neoliberal system and was accepted by the left in exchange for support by the right on a renewal of value added taxes (Gauri 1998).

The Frei administration continued the focus on quality and equity of education started under its predecessor, reflecting the move away from the neoliberal focus of the 1980s on efficiency (Cox et al. 1997; Carnoy 2007). These priorities also contained a high degree of ambiguity. On the one hand, Frei continued several targeted equity programs started under Aylwin and moved the Chilean education system from half-day classes to a full-day schedule. On the other hand, Frei moved forward with proposed changes to the teacher statute immediately after taking office. These reforms had been abandoned (ostensibly postponed until after the 1993 election) by Aylwin's government because of intense opposition to them by the left's electoral base. Among the changes was a provision to allow municipalities to move teachers between schools to match shifting student demand (Gauri 1998). Frei also moved quickly on a major change to the teaching profession: the introduction of teacher evaluations and performance-based pay through the 1995 National Teacher Evaluation System (SNED) (Cox and Lemaitre 1999). Its adoption was made possible by a simultaneous increase in teacher salaries and other improvements to teaching conditions (Mizala and Romaguera 2000). These evaluations would occur at the collective level — schools were awarded a distinction for their performance, not individual teachers — and were based on a range of metrics, not only test scores (Mizala and Romaguera 2004).

[20]New limits were increased to multiple times the value of the subsidy, although the subsidy was decreased discounted based on value of the copayment.

After being elected in 1999, Lagos released a document outlining his government's priorities. The document was subtitled "Growth with Equity" and its first two priorities were economic growth and education (Lagos 1999). In the section on growth, the focus was placed on the need for better workers — providing greater training and education to boost human capital and allow Chile to (continue to) compete at the global level. It also outlined a plan to increase technical education and move more students into those positions. Nevertheless, the Lagos administration began its education agenda with uncontroversial policies, like those of its predecessors, continuing targeted programs and extending the number of years of mandatory schooling (Weinstein 2017).

Despite this rhetoric and despite being more left than his predecessors, the biggest change under Lagos was a slight shift to the right on merit pay, which introduced individual level evaluations in 2002. The reforms passed because the new system was implemented on a voluntary basis and because previous salary raises that demonstrated to the unions a good faith interest by the government (Mizala and Schneider 2014). Still, these reforms capture the ambiguity of the era. On the one hand, the left enacted policies clearly more in line with a neoliberal agenda. On the other hand, they were in keeping with technocratic recommendations (the Brunner report, discussed below, explicitly endorsed merit pay) and held the promise of equitable enhancements to school quality.

Policy Legacies

The three Concertación administrations of Aylwin, Frei, and Lagos faced three common policy legacies that limited their ability to adopt the left's ideal education policies: the perceived threat of another coup, the electoral system, and bureaucrats at the Ministry of Education appointed under Pinochet.

Fear of another coup Fear of upsetting the right and provoking another military reaction created guardrails within which the newly elected government had to stay. The Aylwin

government faced the crucial task of convincing business elites and the military that the center-left would continue to support the neoliberal economic policies they credited with the sustained economic growth of the country (Giraldo 1997). In order to avoid direct comparisons with the high tension created during the Allende government, the first Concertación government never referred to education changes as "reforms" (Bellei and Vanni 2015). They also attempted to make any changes inclusive of all major stakeholders in education, non-ideological, and flexible in the freedom they gave to local implementation (ibid.). Many of the policies they pursued were focused on trying to recover what had been lost more than advancing a new agenda (Weinstein 2017).

Anti-democratic electoral elements Changes to electoral rules put in place in the waning days of the military regime created two obstacles to policy reform: the binomial electoral system and "designated" senators.[21] Under the binomial rules, electoral districts received two seats, assigned based on plurality rules and going to the top two vote-winners. However, a party or bloc could only win both seats in a district if it managed to win twice as many votes as any other party (Nohlen 2005). The system heavily favored conservative parties that had supported the military government (Carey 1999). Further, the addition of the designated senators stacked the upper chamber of the legislature with right wing politicians. The combination of these two electoral elements made winning a majority in both chambers impossible for the left and limited its ability to pursue structural changes to the education system that would have required bicameral legislative support.

Pinochet's bureaucrats Finally, the government had to deal with the bureaucratic legacy within the Ministry of Education. After 17 years of military rule, the Ministry of Education was staffed with many who were interested in maintaining the status quo (Anonymous Interview 2 2017). Leadership positions in the ministry were appointed, but these lower-level

[21]The system also created "lifetime" senators, but only Pinochet and Frei ever received that title.

bureaucrats had power to resist changes and delay implementation.

Stakeholder pressures

In the elections immediately following the return to democracy the Concertación formed a diverse electoral coalition, contributing to its ambiguous position regarding education policy. In order to appeal to a wide range of actors, the Concertación attempted to maintain a lack of clarity of the government's position on many of the crucial aspects of the system (Gauri 1998). Partly as a result, teachers (who played an important role in this coalition) and students (who played a secondary role) were disappointed in the half-measures they were given by the new democratic governments.

Above and beyond the historical connection between the left and the unions, the Concertación strengthened its bond with the teachers' unions during their 1989 pro-democracy "no" campaign. Communist teachers openly opposed the military regime during the 1980s (Matamoros Fernández 2017) and the plebiscitary campaign was supported generally by the labor unions (Drake and Valenzuela 1989). Gaining the support of the unions ensured victory against the military regime. In order to secure this support, the left promised to reverse the fall in prestige and real pay that the teaching profession suffered under military rule.[22]

The center-left increased teacher salaries almost immediately after coming to power, but was unable to match previous levels, adjusting for inflation, because of competing budgetary demands. Further, many reforms that the unions sought relating to the teaching profession were moved down the political agenda. The teachers began to demand the center-left and left fulfill their end of the bargain and pay the "historical debt" owed them. The idea that the teachers are owed a debt for the professional (and financial) degradation they suffered under the military regime and the role they played in ending its tenure continues to be a refrain in union and leftist politics (Bellei 2001).[23]

[22]There was little doubt that if Pinochet lost the plebiscite *and* respected the outcome, the left would have an easy victory in the ensuing elections. This helps to explain the electoral changes and education policy put in place by the departing military regime.

[23]This refrain continues to the present day. During the 2015 debate over a proposed teaching law, the

The passage of the Teaching Statute under Aylwin was favored by the teachers' unions, but the Concertación governments strained this relationship in several ways in the coming years. First, the Frei government walked back some of the labor protections afforded by the new law only a year after it was passed (Gauri 1998). This triggered a strike in 1994 that took months of negotiation to resolve. Eventually, the unions agreed to a modified version of the proposal to allow municipalities to move teachers to match student enrollment.[24]

Students were also disappointed in the response they received from the new governments. In 1992 university students called for tuition reforms, specifically for flexible tuition adjusted to meet students' ability to pay. The Concertación governments responded with legislation to increase loans to low-income students and allowing the sales of this debt to private banks (Palacios-Valladares and Ondetti 2018). Far from satisfying students, this move both engendered student protests and entrenched the neoliberal system at the tertiary level further (Palacios-Valladares 2017). In response to the increased dissatisfaction, the Aylwin administration increased scholarships for low-income students (Palacios-Valladares and Ondetti 2018). The protests decreased, but students remained dissatisfied with the response from a government they had expected to be an ally.

Expert Advice

All three of the first Concertación governments relied heavily on technocratic advice in designing their policies. Indeed, "the intensification of governmental actions in the education field obeys the double proposal [of CEPAL and UNESCO] to raise levels of general productivity…and fight against inequality and poverty, privileging education as the principal mechanism of social integration" (Cox et al. 1995, p. 13). Aylwin's government participated in an important series of meetings with the United Nations Economic Commission for Latin

main teachers' union called for an indefinite strike. They cited a call for "reparations to the affected for the historical debt" as the second of five justifications for the strike (Moya, Vargas, and Machuca 2015).

[24]In the compromise municipalities could dismiss teachers if enrollment dropped sufficiently, but only according to annual plans that included strict limits.

America and the Caribbean (ECLAC) (Cox et al. 1995). During Frei's government, the internal "Brunner commission" produced a crucial (and sharply critical) report on Chilean education that shaped policy for years to come (Brunner et al. 1995). Equally, policy design under Lagos was influenced by outside factors, including international technocratic input. François Delannoy at the World Bank, in particular, played a crucial role in shaping policy during the Lagos administration (interview with Weinstein 2017). As Delannoy (2000, p. 23) writes, "the implementation of the government's education change process over this period benefited from a strong political commitment and a stable technical team."

Of these influences, perhaps the most important was the "Brunner commission," so named for its chair. Frei called for "a National Commission for Educational Modernization, with representatives of different sectors including, among others, the Teachers Union, businesspeople, the Church and public and private school administrators" during the first year of the his administration (Bellei and Vanni 2015, p. 184). Frei's decision to include such a wide range of actors, particularly the teachers, but also academics and actors of many "colores políticos," increased the likelihood that reforms based on their proposals would pass and be implemented effectively (Weinstein 2017). The resulting commission produced a report that acted as a guidebook for education proposals.

The Brunner report produced a range of recommendations. Some focused on non-partisan and uncontroversial ideas — an extended school day, for example. Others, more closely aligned with the right's vision for education in Chile — further decentralization (staffing decisions should be made at the school and not municipal level and subsidies should be paid to schools directly to encourage increased performance) and teacher merit pay (Bellei and Vanni 2015; Gauri 1998). This latter point became the most controversial — and most surprising — policy change during this period. Introducing teacher merit pay is a surprising policy position for the left to take for two reasons. First, it is opposed by the teachers' unions, a key supporter of the left. Second, tying salaries to measurable performance more closely fits with the ideas of competition and efficiency central to the neoliberal vision for education.

The administration promoted the proposed legislation under the slogan "participation, quality, and equity" (Weinstein 2017), pointing to a strategy of framing the reforms in terms acceptable to the left's base. Nonetheless, the left pursued this policy because of the Brunner commission's report that more rapid advances in the quality of Chilean education were limited by the quality of instruction (Comité Técnico n.d.; Bonifaz 2011; Weinstein 2006). Addressing teacher quality seemed a pressing issue and linking teacher pay to performance was a policy idea gaining traction in international circles at the time.

The policy calls by experts in the 1990s focused on quality and equity of education (Cox et al. 1995). Chile had reached near universal enrollment at the primary and secondary levels during the 1980s, but it was evident that the quality of this education was substandard in many schools. In light of these recommendations and as a way to avoid conflicts with the right, the Aylwin administration pursued less controversial policies focused on improving school quality, particularly in rural schools. Some of the targeted solutions included the Primary Education Quality Improvement Program (MECE-Básico) and the 900 schools program (P-900), both of which were designed and recommended by technocrats as a way to enhance equity (García-Huidobro 2000).

MECE included a range of provisions to help improve the quality of schools, including greater funding for textbooks and school libraries and an expansion of pre-primary education. The program was funded partially through loans from the World Bank and lasted from 1992–1997. MECE was originally aimed at primary schools (MECE-Básico) and was accompanied by a sister program focused on rural schools (MECE-Rural) (Cox and Lemaitre 1999). Later, a similar program for secondary schools (MECE-Media) was added under Frei (Cox et al. 1995). Finally, the P-900 program identified the worst performing 10% of all Chilean schools and provided a high degree of support to these institutions. Schools in the program were offered pedagogical materials and technical assistance for implementing changes. The program was largely considered to be a wild success (Delannoy 2000; Redondo, Descouvières, and Rojas 2004; Waissbluth 2013). These programs are indicative of the center-left's strategy

during this period. Structural changes were not politically feasible, so instead they pursued smaller programs aimed at addressing equity in ways unlikely to generate controversy.

5.3.4 Bachelet, 2006–2010: Student Protests Drive the Agenda but Accomplish Little because of Political Constraints

- **Copayment**: Slight leftward shift. Allowed special education programs to participate in copayments (2007); planned gradual replacement of the scholarship program with a new subsidy to cover copayments for low income students (2008)
- **Selection**: Moderate leftward shift. LGE places some restrictions on using student backgrounds for selection into primary schools (2009)
- **University tuition**: No change
- **Vouchers**: Slight leftward shift. SEP provides additional subsidy payment to schools that education high percentages of low-income students (2008)
- **Decentralization**: No change
- **Merit Pay**: No change
- **Teacher statute**: No change
- **Profit**: No change
- **Additional Projects**: LGE replace LOCE as main education law (2009)

The most significant piece of policy to result from Bachelet's first administration was a replacement for the primary law governing the education system (the LOCE) passed on the final day of the military regime. The decision to pursue education reforms at all was driven by massive student protests in 2006. The new General Education Law of 2009 (LGE) represented the first real attempt to weaken the market-based education system, although it left the principle components in tact, including allowing subsidized schools to select students, charge a tuition co-pay, and be incorporated as for-profit entities. Despite leaving these structures in place, the agreement between left and right on the LGE represented a fundamental shift in thinking about education. It was a tacit admission that the market alone had not fulfilled its promises to create high quality, equitable education for all and

opened the door to further, significant, changes in the future (Corvalán and García-Huidobro 2015).

Bachelet's administration also passed legislation aimed at reducing social inequality without changing the underlying market-based structure of the education system. The 2008 Preferential School Subvention Law (SEP) changed the calculations used for the voucher payment to take into account the socioeconomic status of each student (Valenzuela and Montecinos 2017). Schools that enrolled students from the bottom half of the economic spectrum would receive an increased subsidy of up to 70% with an additional bonus for enrolling large numbers of these students (ibid.).

Policy Priorities

Education was not a central plank in Bachelet's platform during the 2005 presidential campaign (Palacios-Valladares and Ondetti 2018). Debates on education were confined largely to questions about pre-primary education. All candidates were in agreement over the importance of this level and the need to support it, but differed in their motivations. Bachelet voiced support for free pre-primary education in Chile as a way to combat inequality (Zúñiga 2005b). This stood in contrast to her opponents who, during a debate in July 2005, were in agreement that pre-primary education should be accessible at no cost (at least for the poorest 60% of Chileans) but explicitly expressed their interest in improving access to this level of education as a strategy to boost economic growth (Zúñiga 2005a).

Just before Bachelet was sworn into office, Martín Zilic, the incoming Minister of Education, reiterated the government's position that education was crucial for continued development in Chile while simultaneously signaling the left's focus on equity by discussing the importance of boosting education metrics in the lowest performing schools (Gómez 2006). Still, there was little indication in these statements that education would be a policy priority.

Massive protests by secondary level students in 2006, known as the Revolución Pingüina,[25]

[25]The "Revolución Pingüina" (Penguin Revolution) takes its name from the typical Chilean student uni-

forced education to the forefront of the government's agenda. The protests began with the relatively modest demands that students be given free passes for public transportation and the fee eliminated for taking the national University Selection Examination (PSU). The students escalated to a call for a complete rewrite of the LOCE after meetings with Michelle Bachelet (Jaramillo 2006). These demands helped to move public debate toward a larger discussion on equity in the education system and shortcomings with the neoliberal economic model on which it was based (Amorós 2006). The focus on inequality was apparent to all and fed into the feeling on the left that the time had come for larger changes in education (interview with Zilic 2017). As one of the student leaders put it, "The Concertación's great debt, and they know it, is education. What they're doing now is important, but it is [still] lacking" (César Valenzuela as quoted in Pavez 2006).

As protests continued, the situation began to spiral out of control. Bachelet moved to make changes in the Ministry of Education, replacing Martín Zilic with Yasna Provoste as the Minister of Education, a nod to the stakeholders. Both had ties to the DC, but whereas Zilic was a surgeon by training, Provoste was a teacher. Bachelet's decision to appoint a former teacher illustrates the shift in education priorities. Provoste's background in education signaled to both the unions and students that they would be given a greater seat at the education policy table. The new minister adopted a new approach to the negotiations, including making other changes on the negotiation team. One addition was Pilar Romaguera, a technocrat with no illusions about the task at hand: "My job is to advance the dialogue and return the conversations with the students to arrive at a positive result" (as quoted in Zúñiga 2006). This contrasts Zilic, who argued that he had been chosen for the post to address claims about the mismanagement of Mineduc (interview with Zilic 2017).

The student protests in 2006 ultimately led to the passage of the Ley General de Educación (LGE) in 2009 (Waissbluth 2013). The LGE laid the groundwork for future reforms although it made few immediate changes to the system. In introducing the law to the

forms, which bear some resemblance to a penguin's coloring.

Congress, Bachelet noted that the education challenges facing the country were quality and equity, but did not draw a direct connection between the market-based nature of the education system and inequalities that underlay the student demands (Bachelet 2007). The resulting law reaffirmed the role of the state in education, expanded educational objectives and made them more flexible, and incorporated pre-primary education (which had existed previously, but was not defined by the LOCE) (Santos 2018).

Policy Legacies

By the time Bachelet was sworn into office, the policy legacies of the military regime had weakened but they had not disappeared entirely. The passage of the LGE to replace the LOCE is evidence of this shift. During the debate over the proposed law, Bachelet made the first public references to an agenda to make fundamental changes to the system (El Mercurio 2007f). Although the discussion was tepid at first, it marks an important point in the story of Chilean education policy. These proposals (which included, among other things, a call to end profit in education) would not become law during Bachelet's first term, but even broaching the topic led to strong civic debate and opposition by conservative sectors of Chilean society. Some accused the administration of opening up an ideological battle and ignoring the role that private education played in the development of Chilean education (El Mercurio 2007c). That such a debate was possible indicates a shift in the strength of the military's policy legacies; that the suggestions were met with a forceful response indicates that the neoliberal education system was still a legacy with which the left had to contend.

During the debate over the proposed education law, the Alianza voiced opposition to the proposals because of a perceived lack of focus on quality (El Mercurio 2007a; El Mercurio 2007b). The coalition put forward its own proposal, titled, "Quality, equity, and liberty" (Campusano and Dalgalarrando 2007). "Democracy" later replaced equity in the right's description of their priorities (El Mercurio 2007e). Both formulations display a high degree of similarity to the education initiatives under the Lagos administration, providing further

evidence that despite the Alianza's opposition to the proposed law, there existed a significant degree of convergence with the left.

Debate continued throughout the legislative session and an initial compromise between left and right failed. Ultimately the legislation was salvaged after language was changed to avoid objections raised by the private and subsidized school teachers (Ebner and Campusano 2007; El Mercurio 2008c). This final agreement between left and right that led to the LGE represented a fundamental shift in thinking about education in Chile. Among other things, it was an admission that competition alone had produced neither quality nor equity in education (Bellei and Vanni 2015), one of the foundational claims of the logic behind this system (Chubb and Moe 1990). This new law also marked a shift away from minimum standards that schools must move toward more general standards describing educational goals (Montt 2017). Thus, during Bachelet's term the consensus between left and right continued, but only after being shifted in the direction of the left's preferred policies.

Stakeholder pressures

The greatest stakeholder pressures on the Bachelet administration came as a result of the student protests. Despite the subsequent political careers of some of the movement's leaders and historical ties between students and the left, the Concertación did not have deep ties with the student movement (Niedzwiecki and Pribble 2017). The weak relationship partially explains the tepid initial response to the student protests and hesitation in including them in negotiations over proposed education policy.[26] However, the movement received widespread public support, with surveys reporting support for the students near 70% (Gálvez 2006) and Bachelet's popularity falling from 65% to 44% (Adimark 2006b). This forced the government to act. Yet a divided public also contributed to a limited degree of change in the resulting

[26]This weak relationship manifested itself again during the subsequent Piñera administration. The left had a better relationship with students relative to the right, but as the opposition party in 2011, the left's coalition chose to exert only minimal pressure on the Piñera administration to make changes (Niedzwiecki and Pribble 2017).

LGE. While a large majority (87% according to one survey) opposed the left's proposal entirely, similar numbers also supported the idea of ending profit in education and preferred guaranteed education over "educational freedom" (75% and 88%, respectively), central points in the right's education vision (El Mercurio 2008a).

Students drove the issue of education to the top of the political agenda and have received the most attention in the analysis of this event, but they were not the only participants in the demonstrations. Parents and teachers also participated, further elevating the urgency of the issue. In conjunction with student protests and meetings with Bachelet, the teachers' union went on strike and members of the parents' association threatened a hunger strike (La Tercera 2006).

Teachers placed other pressures on the administration, ultimately forcing it to abandon plans to revise the merit pay system. Some of the most vocal opposition came from teachers at subsidized schools, who were concerned that new reforms may bring them under regulations previously reserved for public school teachers. In particular, the Corporation of Private Schools (Conacep)[27] voiced opposition to the suggestion that teachers at subsidized schools should be subject to a standard evaluation (El Mercurio 2006). Even though a majority of teachers (as well as a majority of the general public) favored individual teacher evaluation (El Mercurio 2008e; El Mercurio 2008b), the administration ultimately shelved these plans.

Business elites represented an interest that could not be ignored by the left during this period, even if they were not part of its electoral strategy. The election promises to focus on pre-primary education were partially aimed at pleasing this group, who had been increasingly focusing on pre-primary education as a target for improving economic output in the future (El Mercurio 2005b; El Mercurio 2005c). Student demands pushed this issue down the political agenda, but the LGE included provisions to increase access to early childhood education in keeping with these campaign promises.

[27]Conacep members include both fully private and subsidized schools.

Expert advice

Bachelet signaled an interest in relying on experts at the start of her administration. The appointment of Zilic as Minister of Education, for example, showed a focus on technocratic administration. The continuation of expert advice was important for Chilean education because Bachelet came into office in the wake of several reports evaluating education under the Lagos administration that identified areas in need of improvement. Some argued that the outcomes in education (and health) were lower than should be expected given the level of investment (Vergara 2005). Others, including the Minister of Education Sergio Bitar, claimed education quality had suffered after the period of expansionary access (El Mercurio 2005a). These positions drove the dialogue during the presidential elections and helped to set what Bachelet had hoped would be her top education priorities.

Experts continued to push the importance of education for long-term reduction of poverty during this time period as well, contributing further to the role that education would play in Bachelet's administration (Büchi 2005). Economists, business leaders, union officials, and politicians on both left and right agreed that investment in education was absolutely critical for the continued growth and development of the country (El Mercurio 2007d; El Mercurio 2008d; El Mercurio 2008f; Castañeda 2009). Bachelet followed the advice of these experts in crafting the LGE, ultimately producing a moderate document that maintained the essential structure of the neoliberal system.

5.3.5 Piñera, 2010–2014: Status Quo under the Right

- **Copayment**: Slight rightward shift. Schools must report number of students exempt from the copayment and the resources dedicated to cover this gap (2011)
- **Selection**: No change
- **University tuition**: No change
- **Vouchers**: No change
- **Decentralization**: No change

- **Merit Pay**: No change
- **Teacher statute**: Slight rightward shift. Added greater flexibility to teacher statute (2011)
- **Profit**: No change
- **Additional Projects**: Program of professional development for school principals; new scholarships for students studying to become teachers; ACE (2011); Superintendent of Education (2011); Extension of compulsory schooling (2013)

Just as Bachelet was constrained in her first term, Piñera was also limited by the legacies of the left. During the first Piñera administration there was neither fluctuation in policy nor efforts to undo the Bachelet reforms. The center-right government found itself substantially constrained by public opinion and reversing the newly enacted policies would require political capital that the administration preferred to spend in other areas. In fact, the continuation of policy was so striking that Alianza politicians were quoted as saying they expected that the left should have no difficulties in voting with the right on any education legislation under Piñera (El Mercurio 2010d). The administration came to office with a wide range of goals for education. Partially as a result of this lack of focus, the administration accomplished very few of its education goals.

The only major education legislation to come out of this administration resulted from ideas originally proposed under Bachelet — a new bureaucracy in charge of education quality. The result, the Education Quality Assurance System (ACE) and Superintendent of Education were created within the Ministry of Education and given real power for dealing with failing schools. These additions enjoyed bipartisan support and are representative of the consensus between left and right on equitable improvements to education quality.

Policy Priorities

Before taking office, Piñera laid out his administration's priorities in a document focused on the right's vision for Chile: a society of opportunity, security, institutions, and values (Piñera

2010, p. 8). The document portrayed a clear ideological commitment to market economics and a (very) limited role for the government in reducing economic inequality. Yet it also called for changes to education that were more in line with the left's vision: enhanced access and quality, particularly at the pre-primary and tertiary levels couched in the language of equality. Nowhere in the document was there a proposal to roll back the reforms introduced under the previous Concertación governments. Rather, it criticized these administrations for spending the education budget poorly and proposed creating a new agency to ensure quality education. The policy document demonstrated the right's focus on *growth*, both generally and in relation to education policy specifically, and the degree to which the left and right had already converged in this area.

A little more than a year later, Piñera released a second document outlining in more detail his administration's plan for education. In it, he proposed an increase in spending on higher education through more student loans, not through state expenditures, thus responding to an OECD report (OECD 2010) that the Chilean government was spending too little on higher education while maintaining a position acceptable to the right (El Mercurio 2011e). Piñera's education plan suggested that there were four challenges facing Chilean education: quality, coverage, finance, and regulation (El Mercurio 2011g). It recommended strengthening the teaching profession, increasing the subsidy for subsidized schools, ensuring quality of higher education, ensuring "instructional freedom," and removing low-performing municipal schools from municipal control (ibid.). The document explicitly claimed that, "education is not only a medium for achieving higher levels of knowledge, abilities, and productivity. But it is also an end in an of itself, one that can facilitate individual achievement and talent development" (El Mercurio 2011h). Nevertheless, the language overall follows the rhetoric of student protests at the time so closely as to leave no doubt that it was written in response to that movement, demonstrating the power of stakeholders to constrain the government.

In line with these documents, Piñera chose to focus on pre-primary education. The right seized the opportunity to act because of the connection between education at this level and

citizenship outcomes (such as reduced crime rates and fewer future encounters with police) even though the national discussion about the importance of pre-primary education was ongoing (interview with Zilic 2017).

The Piñera administration passed two laws aimed at increasing the quality of schooling — a new Education Quality Assurance System (ACE) and a Superintendent of Education (Elacqua 2015). These agencies were long-standing proposals and had undergone much of their formation already under the previous Bachelet administration (Anonymous Interview 6 2017).[28] ACE was introduced into the legislature with great controversy but was ultimately passed, however, with bipartisan support (interview with Walker 2018).

The administration also proposed changes to the teacher evaluation system early in its tenure (El Mercurio 2010a). However, the proposals were quickly withdrawn after strong opposition from the teacher's unions and focus was shifted toward improving teacher formation (El Mercurio 2010b).

Partly as a result of having so many diverse goals for education policy, the Piñera administration struggled to implement many of them and faced legislative challenges along the way (El Mercurio 2011c). At the same time, the administration's desire to link tax reform (specifically an increased business tax levy) with education funding created significant hurdles for passing either (El Mercurio 2012a). The combined effect of this strategy was that even proposals that had generated a high degree of agreement in the past made little progress. Creating a superintendent of education, for example, was introduced to the legislature in November 2011 but did not advance beyond the first stage of the legislative process for over a year (El Mercurio 2012c).

[28] An educational quality agency had existed under Allende, but its structure was vastly different than what was proposed (and would be passed) in the 21st century. The modern proposal was first put forth by Martín Zilic shortly before his exit from office. This proposal also differed from what was passed in that it called for an agency that would evaluate, limit profit in schools, and be entirely isolated from politics (interview with Zilic 2017).

Policy Legacies

The right found that it was constrained by the new LGE passed in 2009 and attempted to find ways to make this new policy work to its advantage. One aspect of the LGE was the introduction of a guaranteed pre-school program, *Chile crece contigo* (Chile Grows With You). The program grew very quickly at the start and while its pace slackened during the Piñera administration, the right took no active steps to halt or eliminate the program entirely (Niedzwiecki and Pribble 2017). Instead, it increased the compulsory years of schooling from 12 to 13, extending it with a year of kindergarten. The new law guaranteed a public option for the additional year of schooling, but it did so at no additional financial cost because *Chile crece contigo* already accomplished the same goal (ibid.). Extending mandatory schooling thus acted for the right as an easy political victory at no cost. Long-term, however, this change entrenched a new norm and further drove convergence with the left.

The left's reforms related to teachers also limited the right's policy scope. After the nearly two decades of military control in which prestige and real pay fell for teachers, the low quality of existing teachers and of those entering the profession was a well-documented problem (Ávalos 1998). The new democratic governments sought to address this problem through the SNED and subsequent teacher evaluations including efforts under Bachelet to recruit high-quality teachers. The Piñera administration continued these efforts and even added new initiatives including a scholarship program for highly qualified teaching candidates (Ávalos 2015). The right pursued these policies for at least two reasons: the Ministry of Education had already invested significant resources in this problem and inertia drove an interest in continuing them and there existed evidence of the effectiveness of the programs (Flotts 2011).

Stakeholder pressures

Pressure from general public opinion and members of the right's constituency push it toward convergence with the left in education policies. During the 2009 election, Piñera found he

had to commit to maintaining existing public programs. Once in office, he had to negotiate a deal with the left on pre-school education (El Mercurio 2011b). This compromise and continuity approach played well with voters, who overwhelmingly (75%) approved of a grand national agreement for education (Herrera 2011). During these negotiations and in selling the proposals to the public, right of center politicians focused on the claim that the best way to equalize opportunity was through education, particularly at the pre-primary level (El Mercurio 2011f). This also appealed to the business elites who supported UDI (Roberts 2011) and had called for improved quality of education in order to provide a skilled workforce (El Mercurio 2008f).

The right also found that stakeholder pressures pushed it toward including equity as an explicit goal, at least in its rhetoric. Leading into the debate about the 2012 national budget, two rogue RN senators proposed adding equity as a goal to be achieved through education, among other policies (El Mercurio 2011i). This break from the party line pointed to emerging battle lines for the 2014 presidential elections and a prescient reading of the direction of public opinion and national debate.

Chilean political parties have long been criticized for being elitist. After repeatedly losing elections after the return to democracy, the Chilean right pursued a new and unique electoral strategy that involved sustained, direct contact with youth. They created opportunities for students to become involved in the party in a pipeline system that would place them on ballots as candidates at a young age (Luna 2010). The result of this strategy, pursued largely by UDI, was a massive growth in party membership and greater electoral success.

In spite of this strategy, the Piñera administration did not offer a strong response to a new wave of student protests that broke out in 2011. Students focused on a single (if large) demand: free, high-quality public education for all. The movement included students not only at public schools, but also high numbers from subsidized and fully private secondary schools (UNICEF 2014). Unlike the previous student protests, this round was less centralized and split between several coordinating organizations (ibid.). The movement first started with

the modest goals of rebuilding schools damaged in a massive earthquake the previous year and allowing students to ride public transportation free of cost year-round (as opposed to only during the school year, a concession they won previously). It transformed its purpose as university students joined (and then dominated) the movement (Palacios-Valladares and Ondetti 2018).

In the face of these protests and plummeting public approval of the way the administration was handling education, the government opened up a dialogue with the students. These negotiations broke down, after months of frustration and a government crackdown on an unapproved protest (UNICEF 2014). Public support for both the student demands and the protest methods grew (the latter gaining majority support after the crackdown): "the 2011 education movement possessed, from the public's opinion…a profound moral legitimacy" (ibid., p. 17). At one point the movement registered 79% support in public opinion polls (Adimark 2006a). As the conflict wore on, however, opinion shifted dramatically as to who was "winning" the conflict away from the students and toward the government (UNICEF 2014). By the end of the administration the students had accomplished much less than they had under Bachelet.

Expert advice

Piñera campaigned with the charge that the Concertación was "exhausted" and had come up short in fulfilling its promises. He staked out a claim to technocratic solutions to problems and worked to appeal to the center of the political spectrum (Siavelis 2014). After the election he followed through on this promise by selecting technocrats to head his ministries and followed recommendations from international assessments of Chilean education. Outside experts pushed the Piñera administration toward both pre-primary and tertiary education.

Piñera's second minister of education, Harald Bayer, was an economist who had served on the Presidential Education Council in 2006 that had been created in response to the student protests at the time. This combination of experiences gave him a level of expertise

in education uncommon (at the time) for ministers of education in Chile. At times, it also led him to diverge from the official party line on priorities, as in his 2012 claim that the top educational priority was increasing equity so that family income would not determine educational development through life (El Mercurio 2012b).[29] Although these comments may not reflect the overall position of the right, they are yet another example of how the decision to employ experts in the educational policy area helps to drive convergence between left and right.

Outside experts also encouraged a focus on the importance of pre-primary education (El Mercurio 2010e). The press also pushed the administration toward this area. An El Mercurio editorial writes, for example, "To create a society of opportunities — the current government arrived at La Moneda with that promise — it must act in many areas, but education is the fundamental one" (El Mercurio 2011d).

At the same time, the OECD released a report early in the Piñera administration that lauded Chile's growth in education, but noted that it still trailed behind its OECD peers, particularly in spending on higher education (El Mercurio 2010c). More than the student protests, this report pushed the Piñera administration toward a focus on higher education funding. As noted above, Piñera proposed to address the problem not by increasing state support for higher education, but by encouraging student loans, a position supported in the conservative news media (e.g. El Mercurio 2011a).[30]

5.3.6 Bachelet, 2014–2018: Forcing Dramatic Change

- **Copayment**: Dramatic leftward shift. Complete elimination of copayments (2015)
- **Selection**: Dramatic leftward shift. Near complete elimination of student selection practices (2015)
- **University tuition**: Dramatic leftward shift. Free tuition provided for lowest 50% of

[29]Bayer was eventually impeached for failing to address illegal profit practices at universities.

[30]Note that while he pushed for an increase in these loans, Piñera did not make any changes to their administration or the rules surrounding them.

income earners (2016)

- **Vouchers**: No change
- **Decentralization**: Dramatic leftward shift. Legislation to re-centralize the education system (2015)
- **Merit Pay**: Slight rightward shift. Updated system moves toward more individual assessment (2017)
- **Teacher statute**: Slight leftward shift. Replaced teacher statute with new law defining the teaching career (2017)
- **Profit**: Dramatic leftward shift. Elimination of for-profit subsidized schools (2015)
- **Additional Projects**:

In the wake of the 2011–2013 student protests and continued frustration by students, Michelle Bachelet ran for president a second time, including in her platform the promise of ending profit in education (Elacqua 2015). This marked the end of modest and incremental education changes and the start off more aggressive and ideologically-based reforms. Bureaucrats in Mineduc noted that the changes during Bachelet's second administration were characterized by ideological content and not technical analysis (Anonymous Interview 5 2017). The two biggest pieces of education legislation to be passed during this period were the Social Inclusion Law (Ley de Inclusión) that ended copayments, selection, and profit in subsidized schools and the re-centralization of the school system (*desmunicipalización*). These laws were not only ideological, they were major breaks with the past and highly contentious policies (interview with Weinstein 2017). Passage of the Social Inclusion Law was not at all bipartisan, with the entire center-right and right bloc voting against it (interview with Walker 2018).

Bachelet also oversaw the passage of a third significant but less ideological piece of legislation: a law defining the teaching career and replacing most of the teaching statute. Parts of the new teaching career legislation move in a direction more in line with the right's policy position, however. The law includes additional evaluation requirements, extending them

to teachers at all schools that receive state funds (*Carrera Docente (Chile)* 2016). For the first time since the return to democracy, the law defined a full teaching career (Ruffinelli Vargas 2016). It set minimum requirements to study education at the university level, required all teachers to be accredited, and defined five "cycles" of the career (Eyzaguirre 2016). Advancement within these cycles was based on individual level evaluations and came with considerable pay increases (Veas Sánchez 2016). This law represented the result of years of negotiations with the unions, who agreed to individual evaluations only in exchange for real pay raises for all teachers and the connection between evaluations and career advancement (Ruffinelli Vargas 2016). The law was intended to be implemented gradually to lessen impacts on teachers nearing retirement (ibid.).

Policy Priorities

The 2014 presidential election cycle introduced equity enhancement as an early educational priority (Franco, Contreras, and Saldivia 2012). During the campaigns, Bachelet proposed re-centralizing control over primary and secondary education, removing much of the municipal authority in this area (El Mercurio 2013). In the wake of the 2011 student protests, Bachelet also campaigned on the promise of free university education for the poorest 70% of students by 2018 and free university for all by 2020 (Delisle and Bernasconi 2018).

Driven partly by the underlying political agenda of the more left-leaning parties in the coalition and partly by increasing public frustration with unfulfilled promises, the left began to make fundamental, divergent changes to the system. Centralizing the system, stripping subsidized schools of their selective admissions practices, nominally ending profit in education, and finding ways to guarantee fully free education for a larger percentage of the population fundamentally undermine the market logic of the system. This new course was the result of weakened policy legacies (with the passage of time the left finally felt that the risk of a new military coup had subsided), stakeholder pressures (the promise of free university education was partially responsible for Bachelet's victory), and an intentional decision

to ignore expert advice. Additionally, the left controlled the executive branch and held a sizable majority in both legislative houses (partly due to constitutional changes).

Further, many of the student leaders from the protests assumed active political roles with the left after graduation. Several of them (namely Giorgio Jackson, Camila Vallejo, and Jaime Bellolio) were elected to political office as representatives (*diputados*) in the lower chamber. Their place in the party helped to push the demands of students to the forefront of the left's political agenda. The election of these former student leaders to political office did not spell the end of student protests, however. Instead, a new generation of students made even greater demands of the incoming Bachelet administration. The newly elected government insisted their goals in education were in line with the building consensus that education was a tool to end both poverty and inequality, but the students shifted the debate, arguing that education was only one piece of a larger puzzle (El Mercurio 2014d). They insisted that the underlying market logic of the system was incompatible with the goals of reducing inequality and demanded sweeping structural changes to address this problem (El Mercurio 2014c). These demands pushed the administration to accelerate access to free higher education (Said, Herrera, and Toro 2015).

The government's first piece of education legislation took a fairly moderate position, proposing the creation of a new minister to handle university closings in order to ensure that students affected by the closings would be able to enroll in another institution (El Mercurio 2014g). After the initial modest proposal, however, the government introduced a series of sweeping proposals that ignited strong debate from many sectors. These proposals, which would become the "Social Inclusion Law," included an end to many of the practices that subsidized schools relied upon: profit, charging co-pays, and selection of students.[31] The proposals also called for changes to the teaching profession. Additional opposition came from private schools, which felt excluded from a reform process that would affect them

[31]Schools had been allowed to set admissions criteria based on academic achievement, interviews with parents, and religion (Carrasco et al. 2014).

and demanded a seat at the table (El Mercurio 2014b). Equally, the right objected in the legislature to both the nature and the specifics of the proposals (El Mercurio 2014a; Valenzuela and Fernández 2014). Fears rose that the process had become political and that the proposals, if enacted, would end up being decided in the courts instead of the legislative arena (El Mercurio 2014f).

The government's focus on higher education was criticized for taking away resources from more pressing areas such as pre-primary education (El Mercurio 2016b; Margherita 2016) and the focus on "systemic" issues as a distraction from other ways that the government could help the neediest in the immediate term (El Mercurio 2016a). Even though Chilean education had developed significantly by this point, it was still not at a level at which funding for tertiary education had become progressive. Many Chilean students had to take out significant loans to finance their higher education. But because of the low quality of secondary education, they were only able to attend low-quality (often for-profit) universities that produced graduates whose earnings potential did not justify the investment. Ultimately, fiscal constraints forced Bachelet to scale down campaign promises and only provide free tuition for the bottom half of students (Delisle and Bernasconi 2018). While this new policy was mandatory for public universities, it was optional for private ones. Universities that enroll students whose families meet the income requirements must waive tuition and be reimbursed by the state at a fixed rate per student (similar to the subsidy system at lower levels of Chilean education) (ibid.). This led universities to complain that the funding does not reflect actual costs of education (Kershaw 2019) and some observers to speculate that the result will be that low-income students are crowded out of the most selective institutions (Bucarey 2018).

Policy Legacies

Even after the left won and held the presidency four consecutive times after the return to democracy, the right's education policy legacy was still firmly entrenched when the second

Bachelet administration took office in 2012 with a left majority in both chambers of the legislature.[32] The left confronted three major policy legacies: inequality in the education system, sustained partially by the rules allowing subsidized schools to select their students and charge a co-pay, the overall market-based structure of the school system, and steadily declining enrollment at public schools.[33] The Bachelet government opted to address the first two, even knowing that the likely result of the specific proposal would be a further exodus of students from public into private schools (Toro 2014).

Bachelet's intention to re-centralize the education system was in keeping with a long-standing goal of the left. This goal was deferred until the second Bachelet administration for political reasons. As with other policy choices, recentralizing the system would require a legislative agreement between both left and right — one that the right was unlikely to accept. At the same time, the left enjoyed some of the benefits of not having to administer directly all of the country's approximately 10,000 public schools (Gauri 1998). This freed up attention and resources to pursue other goals. Only once the left had both a legislative majority *and* had accomplished much of its education agenda did it move to recentralize the system. Even then, the approach to centralization took a more limited form. Local and regional boards were left in place (albeit in a modified role) and given some limited autonomy (*Historia de la Ley 21.040* 2017). A return to the centralized system in place before the military regime would have required the elimination of many jobs in the intermediate levels of the bureaucracy (Anonymous Interview 6 2017). The political costs of eliminating all of these positions was too high for the left (Anonymous Interview 4 2017). Thus the decentralized policy legacy of the right placed another limit on the range of possible policy for the left.

[32]The left controlled the lower chamber immediately after the transition to democracy. They also won a majority of seats in the senate, but with a slimmer margin, failed to win a majority due to non-elected members (*senadores asignados y senadores vitalicios*) (Carey 1999).

[33]Note that not all observers blame these features of subsidized schools for persistent inequality in education, this is the claim of the left. Those on the right tend to place blame on either the government's continued support of poor-performing public schools or students (or families) themselves. Others on the right accept that these factors may contribute to the problem, but claim that eliminating a profit motive from education will not solve the problem.

Two additional crucial legacies had changed since the first time Bachelet was elected. First, the threat of a new military coup had subsided. Two decades of rule by the left had demonstrated sufficiently a commitment to the neoliberal economic structures the right most wanted to protect. From the perspective of the mass public, the memory of the military dictatorship was fading (Palacios-Valladares and Ondetti 2018, p. 11) and from the perspective of politicians on the left, the fear of Pinochet's return had been replaced by a determination that there would be no return to military rule (Ominami et al. 2010, p. 28). Second, the passage of the LGE had generated at least a tacit agreement between right and left that the market-based education system had failed some students and needed reforms (Bellei and Vanni 2015). These changes opened the door for Bachelet to make more aggressive changes to the education system.

Stakeholder pressures

Under Bachelet, the newly formed Nueva Mayoría coalition continued the Concertación's practice of including the teachers' unions in debates over education proposals. Including the unions in negotiations about the new law on the teaching career was essential for its passage. Nevertheless, the dynamics of the relationship changed. Union strength had weakened, even since the return to democracy, and fewer teachers were joining or participating (Anonymous Interview 2 2017). At the same time, union members became disillusioned with the leadership, which they felt was not taking a sufficiently aggressive stand against a government with whom the union leaders were ideologically aligned (ibid.).

Changes to stakeholder pressures help to explain why the left pursued free university education. Palacios-Valladares and Ondetti (2018) argue that the left's embrace of this policy was a result of changes within party elites due to the 2011 student protests — a more leftist element felt empowered. This group had long existed with the left's coalition, but was forced to take a more limited role in the years after the return to democracy out of fear of triggering another coup. By 2016 the political context had changed, however, and these

more extreme actors could take an increasingly active role in the coalition. The changes to the education law did not receive universal support within the majority coalition. As the agenda became more ideologically motivated, the party divisions within the coalition became more apparent — at the start of Bachelet's second term, for example, not a single member of the DC was appointed to a Mineduc position (interview with Walker 2018).

Although electoral shifts allowed this faction to rise to power within the left's coalition, they pushed forward reforms only by ignoring other stakeholders. During the debate over the Social Inclusion Law, many voiced disapproval of the proposals. According to one poll of teachers, principals, and school leaders, 78% expressed the opinion that ending selection would not improve the quality of education (Herrera 2014).

In addition, new actors mobilized in mass political demonstrations. Specifically, organized groups of parents whose children attended subsidized schools marched against the proposals. The parents were driven by fear that the elimination of the copay would force subsidized schools to convert to entirely private institutions and thus the then-affordable copay would become an unaffordable full tuition (El Mercurio 2014e). These protests did not reach the level of others (the student protests, for example) and many other parents were in favor of the proposed reforms. The protesters were joined by legislators from UDI (and notably not the RN) (Guzmán 2014), suggesting an ideological perspective to the marches that empowered the left to ignore these voices in large part.

Expert advice

While the previous Bachelet administration (as well as other Concertación governments) relied heavily on expert advice in designing their education policies, the second Bachelet government was criticized for *not* consulting experts. Edmundo Pérez Yoma, a Christian Democrat who had served in cabinet positions under Frei and Bachelet claimed that, "we [the Concertación] always achieved things that were well done, well studied, politically well inspired and technically well implemented" but that the second Bachelet administration,

"has been characterized by things half done or, frankly, badly done" (El Mercurio 2016c). Equally, José Joaquin Brunner (former head of the "Brunner Commission") claimed that "The second...[anniversary of Bachelet's inauguration] was marked by badly thought out, designed, and implemented ideas, like free [university] education" (ibid.). The administration's decision to willfully ignore expert opinion was necessary to achieve its ends because many of the policies this group continued to recommend were much more moderate than those sought by Bachelet.

A lack of expert opinion also contributed to the push for eliminating university tuition. Bernasconi (2014) argues that a stable policy environment reduced the scope of academic research within Chile to the point where the radical proposal of free tuition existed in a vacuum of relevant studies. Those pushing the change were not completely blind to its possible consequences, but knew much less than might be expected for such a massive change.

The Bachelet government followed expert advice (partially) in at least one respect: the decision not to fully re-centralize. International education research points to the importance of local inputs in addressing many education problems. The ability to tailor a solution to a micro-level context increases the chances that it will succeed (Bellei 2018). The limited scope of centralization thus accomplished a political goal and took into consideration expert advice.

5.3.7 Piñera, 2018–Present: Uncertain Status Quo

Like his first term in office, Piñera is constrained by the legacies of the left and will be unable to roll back the policies put into place under Bachelet and the left. He has been in office for less than half of his elected term and it is still too early to draw conclusions about the shape of education policy under his administration. However, there are signs that it will be another period of status quo under the right. During his 2017 campaign, general electoral pressure pushed Sebastian Piñera to commit to preserve the education policies put into place under Bachelet, including the provision to expand free university education. According to the

(then) head of the General Education Division, the new administration would not be able to move backwards too much; the only real changes Piñera could make would be the enthusiasm with which the government supports the new inclusion law (interview with García-Huidobro 2017).

This shift in policy position was entirely pragmatic, but it also reflected a deeper reality: that the reforms undertaken by the left were viewed as legitimate (interview with Walker 2018). Not only did the general public view the reforms as legitimate, but party elites on the right also had to concede the legitimacy of the process that produced them (ibid.).

In at least one area, however, Piñera has attempted to break the status quo and roll back a Bachelet-era policy: a limited reintroduction of selective practices at top public schools. He proposed that, starting in the 7th grade, schools should be allowed be allowed to use scholastic achievement as a factor in admitting up to 30% of the student body (an increase from the 15% allowed under Bachelet's Social Inclusion Law) and to interview parents as part of the admission process (Schüller Gamboa 2019). This proposal was rejected by the lower chamber in the legislature, ending the right's hopes to reverse the policy and forcing convergence (Marín 2019).

Policy Priorities

After being elected but before taking office, Piñera's education team made clear that there would be no major backtracking on the education policies implemented under Bachelet. A month after the election, his education coordinator publicly claimed, "From no point of view are we proposing to take a wrecking ball to what the last administration did, but rather to perfect a number of aspects that appear to us fundamental to improve education's functioning" (Cabello, Álvarez, and Valencia 2017).

In addition to campaign promises to leave central aspects of the Bachelet education legacy in place, Piñera also made promises to improve the quality of school leadership if elected again (interview with Weinstein 2017). School leadership was, at the time, an increasingly popular

subject within the education discourse and one the right could support. By focusing on school leaders (as opposed to teachers), the right avoided many of the hot-button controversies that would be electoral losers. Yet if successful, school leadership reforms could be a venue for introducing new market-based ideas into classrooms.

The education agenda of the Piñera administration ran into trouble quickly, with the selection of Gerardo Varela, an outsider with no education experience as his pick for minister of education. The Minister quickly developed a reputation for expressing impolitic opinions. After doubling-down on a claim that school repairs should be paid for with local "bingo" games (as opposed to state support alone), the minister was forced to resign (Reyes 2019).

Policy legacies, stakeholder pressures, and expert advice

The aggressive student protests of 2006 and 2011 helped to generate the left's legacy. Responding to these protests the first time brought education to the forefront of the political agenda and forced the government to address student concerns before teacher concerns, as originally planned. Both responses resulted in policies that the right realized it could not touch without triggering a new round of social unrest.

The left's promises to extend free education are not in line with the right's ideal policy position. Still, the popularity of these programs made them difficult to oppose. Reversing these policies is a political non-starter for the right in the current political climate. Instead, Piñera has indicated that he will attempt to use this legacy as an advantage by expanding free access to technical education (Herrera 2018). This approach serves a dual purpose: by not opposing free education, he avoids confrontation with the left; by focusing on technical education, he can appeal to the economic focus of the right, since this kind of education has direct and immediate impacts on the economy (Busso et al. 2017).

The process of re-centralization is another area with an uncertain future. The changes created several unexpected challenges for the government. There remains uncertainty about the consequences this will have for regional and provincial bureaucracies already in place.

Some speculate that the changes will actually result in new hiring and an increase in the size of the bureaucracy because the changes will create redundant responsibilities (Anonymous Interview 3 2017). Others argue that after such an extended period under the old system, Mineduc's greatest challenge will be to convince the public that they "are not a threat" (Anonymous Interview 7 2017).

Electoral pressure in the 2017 elections pushed Piñera to vow support for the education policies of the left. After the public became accustomed to the expanded pre-primary education implemented by the left, a change of course became politically infeasible for the right, despite the high likelihood of victory at the polls.

5.4 Conclusion

The Chilean case illustrates the political forces that drive education policy convergence between left and right. Each democratic administration arrived with its own priorities, but found that policy legacies, stakeholder pressures, and expert opinion constrained their actions. The Chilean education system was set to move to an extreme left position under socialist president Salvador Allende during the early 1970s. The coup and military regime that followed, however, not only ended those plans but instead imposed an extreme right education system built on neoliberal economic principles of competition and efficiency. These policies created legacies so strong that it took nearly 30 years of center-left and left administrations to overcome them. And even then, the resulting policies are, mostly, moderate positions. Table 5.1 illustrates this visually: the Chilean system moves from a deep "red" to a more "purple" outlook overall.

Under the first three Concertación governments from 1990–2006, the center-left exercised restraint and largely maintained the status-quo. While structural changes related to access and quality were not possible, policymakers pursued side projects that attempted to advance equity through small targeted programs. This period exemplified ambiguity in their desired education policy, with some minor changes appearing to undermine the market-based edu-

cation system and others entrenching it further. The consequence was that by 2006, a high degree of convergence had occurred, driven largely by the left moving toward the right.

Michelle Bachelet's first administration represented the first major changes away from this ambiguity and the status quo. However, the shift was largely externally driven, with pressure from grassroots student protests contributing to a new education agenda more than any other political factor. These protests shifted debate in Chile over education from a discussion on incremental changes to improve quality to a deeper dialogue about economic inequality and its connection to educational equity. The resulting policy, the LGE, did not overturn the Pinochet-era system. But it did represent a consensus between left and right on the failures of this system and it laid the groundwork for future changes.

Sebastian Piñera's first administration was the first time the right had controlled the presidency since the return to democracy, but his administration chose not to spend their political capital on overturning the recently passed education policy. Throughout his campaign and into the first years of his administration, Piñera's rhetoric on education included discussions of equity, reflecting a new political reality. At the same time, he implemented policies on pre-primary education that were recommended by experts and embraced by both left and right. His administration thus demonstrates a convergence in which the right moved toward the left's ideal policy point.

When Bachelet returned to office in 2016, the left moved quickly to make major changes to the education system. With control of both the executive and legislative branches, a decreased fear about inciting another coup due to the passage of time, and an empowered extreme wing of the coalition, the left finally eliminated many of the structures of the market-based system most often criticized for exacerbating social and economic inequality. This moves some aspects of the education system into "blue" territory. Despite this, the current Piñera administration is expected to maintain these policies. An early attempt to roll back one of the reforms (by re-implementing selection in subsidized schools) was rebuffed in the legislature, forcing convergence and sending a clear political signal.

It is these most recent changes where the consensus between left and right begins to break down in Chile. It is an illustration of the difference between *convergence* (the observed state of identical policies under left and right) and *conversion* (a true shift in the underlying ideal policy points). Although it supported old and at times even implemented new policies that were much more in line with the right's vision of education than its own, the left never fully abandoned its underlying ideological beliefs about education. Once the political climate had shifted sufficiently in its favor, the left moved to implement reforms that would move the system in that direction.

Chapter 6

Conclusion

6.1 Left, Right, and Education

This project asked the question what effect does the partisan ideology of the executive have on education outputs (total spending and distribution of spending) and outcomes (access, quality, and equity) in Latin American democracies. Are there systematic differences between left and right on how *much* is spend on education? On *where* that money is directed? Or on whether it *produces* better outcomes under one end of the political spectrum or another? I find that despite theoretical reasons to expect left and right to diverge and previous findings of differences in the OECD, partisan ideology does very little to explain differences in patterns of outputs or outcomes. I argue that this is the case because of enduring policy legacies, stakeholder pressures, and expert advice. I explore the case of Chile in depth, where I show these forces at work. This chapter summarizes these findings and explores their implications for policy and for a broader research agenda and concludes with some thoughts on future work in this area.

Expectations of divergence There are several compelling theoretical and empirical reasons to expect that the left and right will perform differently on metrics of education outputs and outcomes. Political left and right are defined based on differing core beliefs about inequality and the role of the state in addressing inequality (Bobbio 1996; Coppedge 1997; Luna and Rovira Kaltwasser 2014). The left sees inequality as a problem that the state should intervene to reduce, while the right is split between one camp that agrees that inequality is a problem but does not believe the state should take an active role in reducing it and another that does not view inequality as problematic at all (Luna and Rovira Kaltwasser 2014; Wiesehomeier

and Doyle 2014). Because education is so often touted as the solution for reducing both poverty and inequality (The World Bank 2019; Psacharopoulos and Patrinos 2004; Hanushek and Wößmann 2007; Woessmann 2016), it is reasonable to expect that the left and right will have different priorities in terms of education policy and that these policies will translate into different outputs and outcomes.

To be precise, we should expect that the left, which is driven by concerns over *equity* should spend more on education. Within the education budget, we should also expect the left to devote a greater share to primary and secondary education because they are more progressive in nature than is tertiary and to staff expenditures because of the left's deep historical ties with teachers' unions (Murillo 2001), after controlling for the stage of development of the education system. Previous studies in OECD countries have, in fact, found that the left outspends the right on education (Iversen and Stephens 2008; Ansell 2010; Ansell 2008b; Rauh, Kirchner, and Kappe 2011). Other work notes the connection between democracy and education spending (Brown and Hunter 2004; Brown and Hunter 1999; Stasavage 2005; Rudra 2005; Kaufman and Segura-Ubiergo 2001; Wibbels 2006). The combination of these findings with the power resource theory of Rueschemeyer, Huber, and Stephens (1992) and Huber and Stephens (2001) in which left electoral presence generates greater social spending reinforces this expectation. In terms of education quality, the left's concern for equality of *outcome* produces the expectation that it will outperform the right on measures of education quality.

At the same time, there exist some reasons to expect the opposite: that the right may perform on par with the left. Education is connected not only with equity enhancement, but also macroeconomic growth (OECD/ECLAC/CAF 2016; Hanushek and Wößmann 2007) and upward mobility at the individual level (Psacharopoulos and Patrinos 2004), both of which are in line with the right's concern for *growth*. The right sometimes expresses support for equality of *opportunity*, which leads to the expectation that it should perform better on measures of educational access. In addition, some authors have questioned the relationship

between the left and greater spending, finding instead that the right actually spends more on tertiary education (Psacharopoulos and Patrinos 2004; Ansell 2008b; Ansell and Samuels 2010; Rauh, Kirchner, and Kappe 2011) and a few authors find that there is no difference between left and right in Latin America (Huber and Stephens 2012; Huber, Mustillo, and Stephens 2008). Still, the bulk of the literature points to an expectation of *divergence* between left and right on education outputs and outcomes.

Convergence on outputs and outcomes Despite expectations to the contrary, there exists little difference between left and right on metrics of access or quality. The left slightly outperforms the right on gender equity in dropout rates, but the substantive effect is very small and there are no differences on other access or quality outcome metrics.

Chapter 2 presented findings on the convergence of education outputs between political left and right. There are three primary takeaways from this chapter. First, party ideology does not predict overall levels of education spending in Latin America. There is no evidence that either the left or the right on the whole devotes greater shares of the government budget to education policy. Where variation in spending occurs, partisan ideology cannot explain it. Second, the left tends to spend more on secondary education than do other parts of the political spectrum. The differences, however, are small in substantive terms — an average regime change produces a shift of only 0.56% and average shifts to left and right produce, respectively, 1.76% and -1.78% changes. Finally, looking at spending by area, I hypothesized that the left would devote greater shares of the education budget to staff salaries because of the connection between the left and teachers' unions. I find that while the left does not spend more on staff salaries, the right spends slightly more on capital expenses. Again, however, the effect size is substantively small — an average rightward change in administration would produce only a 2.04% increase in capital expenditures as a share of the entire education budget.

Similarly, Chapter 3 presented findings on the convergence of education outcomes between

political left and right. On measures of completion rates, repetition rates, dropout rates, and transition rates, there is no meaningful difference between left and right governments. Equally, on test scores, the best of poor alternatives for measuring true education quality, the political left and right perform at approximately the same levels. There is some evidence that students perform slightly better under right governments, as measured by PISA test scores. However, the substantive effect is very small — in order to produce a single standard deviation change, partisan ideology would have to swing from one extreme of the political spectrum to the other and that change would have to persist for 15 years. Swings that extreme are never observed empirically.

Explaining unexpected convergence Given these unexpected patterns, what can explain this convergence? Chapter 4 provides an alternative theory of the political forces that push left and right to similar policy positions and thus to similar outputs and outcomes. I argue that while policy preferences remain distinct between left and right (the left is focused on *equity* and the right on *growth*), three political factors are dominant and result in convergence: policy legacies, stakeholder pressures, and expert advice. My argument resembles that of Heclo (1978), who finds that bureaucratic and technocratic factors drive policy in the American context. Note that *convergence* — the observed condition of identical policies under left and right — is not the same as *conversion* — a shift in the underlying ideal policy positions for a party. Although the two conditions are observationally equivalent, the distinction is important because it can help to explain when parties will break from these patterns.

Policy legacies create barriers to changes through bureaucratic inertia, creation of political costs, and limitation of the potential policy space. Legacies affect both left and right parties and push them toward convergence on education policy. Some bureaucracies are designed to resist changes in policy (McCubbins, Noll, and Weingast 1989; Moe 1991; De Figueiredo 2002); all are subject to the logic of path dependence (Pierson 2000) where change occurs only at critical junctures (Lipset and Rokkan 1967; Collier and Collier 2002; Levi 1997;

North 1990). Policies become more entrenched over time as procedures and routinization contribute to positive feedback mechanisms (Arthur 1994). The longer a policy has been in place, the more difficult it becomes to change it (ibid.).

Overcoming policy legacies can incur political costs. Politicians tend to be most eager to pursue "flashy" education policies that do not work (Tarschys 2003) or successful policies that are less cost-effective (Busso et al. 2017). Foregoing these types of policies incurs an opportunity cost in terms of the political recognition that can be gained from them. Similarly, there is a political cost associated with many structural reforms in Latin America, where patronage jobs in the civil service (Grindle 1977; Gordin 2002; Dargent 2015) and non-programmatic distribution of education funds (Ames 2001; Brunner et al. 1995; Luna and Mardones 2016) continue to be a problem.

Policy legacies also generate practical constraints. Changes in policy may require massive investments of time or capital. Investing in either of these incurs an opportunity cost to politicians who may prefer to allocate their resources to other policy areas. Limitations on state capacity can also create a barrier to education policy reforms by restricting the policies that can be implemented successfully (Besley and Persson 2014). Finally, natural cognitive processes may limit the scope of alternatives considered by policymakers and generate a preference for the status quo (Prahalad 2004; Jones and Baumgartner 2005).

Both left and right also experience electoral pressures from a situation in which changes to policy are likely to extract (significant) short-term costs while returning only long-term benefits and general public opinion on education. Education policy incurs short-term costs in terms of capital. Education funding must compete with every other aspect of the government budget (Wildavsky 1986), including non-discretionary elements that reduce total funds available for social programs. Latin American states also continue to struggle with raising revenue through taxation (Gavin and Perotti 1997; Goñi, López, and Servén 2011; Shome 1999; Tanzi 2000), further limiting possible funding.

Education policy can also incur short-term political costs exacted by education stakeholders opposed to reforms. Organized political actors, particularly the teachers' unions and business elites create political pressures for parties on both left and right, although each typically aligns with only one of these groups. Teachers' unions exist to support the labor conditions of their members (Moe and Wiborg 2017a) and can use disruptive tactics to oppose policies they view as opposed to their interests. Although the unions tend to be aligned with the left, they hold enough political power that neither side of the political spectrum can ignore them. Business elites also have a vested interested in education, as they rely on the education system to produce skilled labor and allow continued growth (Moe 2017a). As an actor, business elites are diverse and do not always coordinate on policy related to education (Schneider 2004; Moe 2017b). When they do, however, they are also sufficiently powerful that neither left nor right (the traditional partner of the business community) can afford to ignore them.

Finally, expert opinion contributes to convergence between left and right. Technocratic experts, both domestic and international, recommend identical policies regardless of the ideological identify of the party in power (Domínguez 1997). The neoliberal right had a monopoly on reliance on technocratic experts (Dargent 2012; Luna and Kaltwasser 2014), but over the past thirty years, both left and right have increasingly relied on these experts to craft their education policy (Dargent 2015), resulting in similar policies being enacted under all administrations.

Expert advice on access-related policies tends to be very consistent — creating education opportunities and reducing barriers to entry (Wolff, Schiefelbein, and Valenzuela 1994) and improving quality so that students view the benefits of education to outweigh its costs (The World Bank 1995; Busso et al. 2017). Advice on quality-related policies, however, varies to a greater degree. During the 1990s and early 2000s, international organizations pushed for increased accountability (through standardized testing and merit pay for teachers) (PREAL Advisory Board 2005) along with greater decentralization to allow local officials and

schools flexibility in designing solutions (Board 2001). In recent years, however, experts have admitted that there remains great uncertainty as to which policies are most effective in which situations due to a lack of systematic, high-quality evidence (Busso et al. 2017). Nevertheless, expert-recommended policies fluctuate less than politically-motivated ones and the increasing reliance on these actors for policy recommendations contributes to convergence.

Process tracing Chile, a case of least likely convergence I test this explanation with a case study of Chile. Chile is an extreme case in that an ideologically distinct left and right have long held very different positions on education. It is also extreme in the extent to which education is salient to the voting public. If ideology does not matter for education outputs and outcomes here, then it is unlikely to matter anywhere. First, I find that, both outputs and outcomes have converged under left and right in Chilean democracy. Chile performs well on many metrics of education outputs. Enrollment, transition, and completion rates are high and dropout and repetition rates are fairly low. In terms of quality, Chile scores high in comparison to other Latin American countries, but low compared to the OECD. Further, there exists persistent inequalities in education outcomes, particularly along rural/urban and socioeconomic lines. Second, I find supporting evidence for the alternative theory that a combination of policy legacies, stakeholder pressures, and expert opinion are responsible for driving this convergence. The Chilean left experienced great limitations in policymaking due to the legacies left by the military government that ruled from 1973–1990. Both left and right in democracy also found that stakeholder pressures drove the education policy discussion while technocrats produced policy recommendations that resisted ideological changes. The collective result of these pressures is that the Chilean education gradually transformed from a far-right neoliberal system to a moderate compromise system. Some exceptions to this trend exist. For example, the left implemented a system of merit pay for teachers more in line with neoliberal preferences than its own. During its most recent time in power the left also made a concerted push to roll back military-era policies related to subsidized schools.

Under the first three Concertación governments of Patricio Aylwin (1990–1994), Eduardo Frei (1994–2000), and Ricardo Lagos (2000–2006), the left exercised restraint and largely maintained the status-quo. This period exemplified ambiguity in the left's desired education policy, with some minor changes appearing to undermine the market-based education system and others entrenching it further. Michelle Bachelet's first administration (2006–2010) represented the first major changes away from this ambiguity and the status quo. However, the shift was largely externally driven by pressure from grassroots student protests, which were strong enough to disrupt the status quo and push change forward. Sebastian Piñera's (2010–2014) first administration was the first time the right had controlled the presidency since the return to democracy, but his administration chose not to spend their political capital on overturning the recently passed education policy. Throughout his campaign and into the first years of his administration, Piñera's rhetoric on education included discussions of equity, reflecting a new political reality. At the same time, he implemented policies on pre-primary education that were recommended by experts and embraced by both left and right. When Bachelet returned to office (2014–2018), the left moved quickly to make major changes to the education system, attempting to have policy priorities overpower convergent forces. This was made possible by weakened policy legacies, a shift in stakeholder pressures, and an intentional decision to ignore expert advice.

It is these most recent changes where the consensus between left and right begins to break down in Chile. It is an illustration of the difference between *convergence* and *conversion*. Although they supported old and at times even implemented new policies that were much more in line with the right's vision of education than their own, the left never fully abandoned its underlying ideological beliefs about education. Once the political climate had shifted sufficiently in its favor, the left acted to implement reforms that would move the system in that direction. Sebastian Piñera was elected for a second term in 2018 and has thus far accepted the status quo in most cases. He introduced legislation to roll back the limitations on selection in subsidized schools, but was rebuffed in the legislature.

6.2 Policy Recommendations

In a bleak assessment of education politics in Latin America Puryear (1997) writes,

> One of the problems with the debate on education policy in Latin America is that it emphasizes technical problems and ignores politics. The plain fact is that the political problems are much more difficult to resolve…At least three problems deserve mention. First, traditional education systems have created vested interests that are difficult to confront. Large and centralized ministries are jealous of their power and jobs. Teachers' unions, powerful and well-organized…often overpower ministers of education, who may hold office for a year or less. Politicians have opposed reform because they might lose control over decisions on education jobs and investment (often an important source of patronage)…Second, governments traditionally have not given education the necessary political priority…[F]ew have been willing to invest their political capital in education reform…Third, civil society — the consumer of education — has not played a serious role in education policy. Middle and upper class families generally send their children to private schools, and do not experience directly the deficiencies of public education. When they use the public system — for higher education — they tend only to defend public subsidies for that sector.

This project largely confirms these same factors drive convergence between left and right on education policy. But my findings also point to some reasons for optimism on each of Puryear's three criticisms.

Vested interests are difficult to confront This project confirms entirely Puryear's claim that entrenched vested interests are an obstacle to education reforms. Teachers' unions, business elites, and bureaucrats themselves all can contribute to policy stasis. That both left and right are subject to these forces points to the need for bipartisan efforts to overcome them. Thus the first policy lesson to come from this project is that bipartisan (and nonpartisan) reforms present the best option for continuing to improve education in Latin America.

The likelihood of policy convergence should serve as an impetus for politicians to bridge ideological divides and work with their opponents on education agendas. As described above, the short-term costs and long-term benefits of education policy are a major obstacle to

any kind of serious reform. Bipartisan efforts can overcome this problem by reducing the immediate costs as well as the risk that later benefits may accrue to one's political opponent.

Second, to improve the quality of education, improve the quality of governance. Specifically, any efforts to reduce patronage jobs and clientelist use of education funds will create opportunities to use those resources in more productive ways. The move toward greater reliance on technocrats by both left and right is an important step in this process, but it is by no means sufficient. Further efforts to enhance democracy and move away from non-programmatic politics may yield dividends in policy areas (like education) that are not the direct targets of such efforts.

Third, including vested stakeholders in policy design can diminish the likelihood they will oppose changes. The Chilean case illustrates this benefit through the iterated and incremental negotiations with the teachers' unions. The left's long-term strategy of providing the teachers' unions with much of what they wanted (salary increases and a labor law with increased protections) eventually allowed it to implement a system of teacher evaluations and merit pay. This project thus echoes the policy recommendations from Grindle (2004) that the unions be included in the policymaking process from an early stage.

Including teachers in the policymaking process can have an additional benefit. Successful policy requires more than good ideas — it needs a pathway to successful implementation. Bureaucrats and teachers can be potential obstacles to this implementation. Both groups may oppose reforms that they view as confusing, counter-productive, or opposed to their interests (see Golden (2000) on bureaucrats and Payne (2008) and Hess (1999) on teachers). Where I differ from Puryear is in the solution to this problem. He argues that increased accountability and a strengthened teaching profession are the correct response (Puryear 1997). My project does not speak to whether these are good recommendations. Instead, it suggests that enthusiastic supporters of a new policy within bureaucracies as well as "on the ground" in schools can facilitate the adoption of new policy. Understanding the legacies in place that might push bureaucrats or teachers toward resistance is crucial for moving instead

toward support. If policymakers can secure the support of these actors, then they can also establish new paths whose positive feedback will generate increasing returns to education. Including teachers in the policymaking process can increase the probability they will be receptive to implementing the policy at the classroom level.

In weighing the significance of policy legacies in the creation of new policies, this project speaks to the importance of institutions. Given the power of legacies in shaping the course of future policy, legislators should be cognizant of the fact that their policies, if successfully implemented, are likely to be enduring. "Critical junctures" are not misnamed. "Getting it right" at these points is crucial for the development of the education system. In this way, policy legacies can be made to work in favor of stronger education policy. Thus a fourth recommendation is to invest in research that produces institutional plans that will generate desirable positive feedback. Chile acts here as a potential cautionary tale — the left moved ahead with its plans to provide free university education even in the absence of solid research into its effects (Bernasconi 2014). Although it is too early to be certain, there are already indications that the policy may have a variety of negative unintended consequences including crowding out low-income students at the most selective institutions (Kershaw 2019; Bucarey 2018).

Education is not a high political priority To Puryear's claim that education needs to be made an even higher political priority, this project offers the additional concern that there are significant hurdles to education reforms *even if* politicians make it a priority. While prioritization is important, it is not sufficient. The case of Chile speaks to this issue in several ways. The center-left Concertación governments that came to power after the return to democracy made education an explicit priority. Yet they were still constrained significantly in the type and scope of reforms that were possible. They opted for small programs aimed at enhancing equity by targeting the lowest performing schools. This strategy produced positive results. In this sense, Chile can offer both hope and a potential policy recommendation.

Faced with seemingly insurmountable constraints imposed by policy legacies, politicians can nonetheless pursue targeted projects whose smaller budgets and limited scope make them unlikely to face resistance.

The positive feedback loops that policy generates makes these smaller programs even more important. Increasing quality education provision will generate demand for ever greater levels and constrain politicians who cannot reduce this provision. Successful targeted programs can lead to increased expectations and public demands that force convergence on greater education provision. In this sense, the effect of policy legacies can be a positive force for improving education systems. Policy legacies can tie the hands of politicians. If the legacies in place provide positive outcomes for students, then these limitations can be a positive for society. Again, the Chilean case provides just such an example. The increased provision of pre-primary education (which is essential for long-term equity enhancement) under Bachelet created in only a couple of years a legacy that Piñera was bound to respect after taking office.

Civil society has not played a significant role in policy Puryear's third claim is that civil society has not contributed to education policy in positive ways. Again, this project offers some insight into the obstacles that exist for greater contributions from actors in civil society. Collective action problems by parents and students, along with a frequent disinterest from business elites combines to make education a lower political priority. Here again, though, Chile offers some hope. The student protests in 2006 drove the education debate in significant ways. Without these events, it is unlikely that the Concertación would have pursued the LGE, which opened the door to further changes to the system. Equally, the 2011 student protests eventually resulted in the provision of free university tuition to over half of all Chilean students. The consequences of this change remain to be seen, but the policy lesson is clear: in democracy, demands from citizens can produce meaningful policy change.

Education advocates — both citizens and politicians — can take from this study the

lesson of the importance of stakeholders on education policy reforms. Given the pressures stakeholders can place on legislators and the role that these pressures play in driving policy convergence, organizers and advocates can leverage this power to drive a reform agenda. This does not provide a clear roadmap for how these groups could overcome their collective action problems, but the Chilean students may provide at least a couple of clues for applying pressure once organized: specific, focused demands are more likely to yield specific, focused policy and maintaining support in public opinion is essential for convincing politicians they must make education a priority.

Equally, from the perspective of reform-minded politicians, leveraging public opinion in support of desired policies can create pressures for one's own party and the opposition. Strategies to drive the dialog and encourage public support can help to overcome pressures from either teachers' unions or business elites and legislative inertia. The Chilean case is one of organic protests — they originated from the bottom-up — but savvy politicians can drive the dialogue themselves in a top-down approach. Shifting opinion to focus on education generally or in favor of a specific policy can shift dramatically the dialogue on education policy and help to advance a policy agenda.

6.3 Broader Implications

Beyond policy, this project contributes to a number of existing bodies of work related to Latin America, politics, and education. It speaks most directly to the growing literature on the *politics of education*, but it also speaks to work on parties in Latin America, education policy and development, and Chilean politics. Finally, although this project focused on Latin America, its lessons may extend to the context of the United States.

The politics of education This study heeds the call of Clark (1986), Busemeyer and Trampusch (2011), and Gift and Wibbels (2014) and attempts to add to our understanding of the *politics* of education. There exists some research on the political determinants of education spending. Iversen and Stephens (2008), Ansell (2010), Garrett (1998), and Iversen and Wren

(1998) find that the left spends more than the right on certain areas in the OECD. Many others (Brown and Hunter 2004; Brown and Hunter 1999; Stasavage 2005; Rudra 2005; Kaufman and Segura-Ubiergo 2001; Wibbels 2006; Huber, Mustillo, and Stephens 2008; Hecock 2006) find that democratic governments tend to spend more on education than authoritarian governments. This study contributes to this literature. While it does not contradict any of the findings of these studies directly, it does suggest that in the high-inequality and less developed setting of Latin America, the relationships between partisan ideology and education outputs operates in different ways from in the OECD. My counter-intuitive findings that there is little relationship between partisan ideology and education outputs contrasts work in the OECD, but confirms findings by Huber, Mustillo, and Stephens (2008), Huber and Stephens (2012), and Garritzmann and Seng (2016).

This project also extends the literature in an important new direction: studying the connection between partisan ideology and education outcomes. There exist many studies that look at the relationship between partisan ideology and *what* is taught in schools (Kelly-Woessner and Woessner 2008; Niemi and Niemi 2007), *how* it is taught (Runhare and Muvirimi 2017; Journell 2010), and the overall *structure* of the education system (DeBray 2006; Busemeyer 2014). Yet, to the best of my knowledge, there exists no other study that asks whether partisan ideology affects the degree to which students enroll in and complete schooling and whether they learn anything while they are there. Connecting partisan ideology with education outcomes is a novel contribution. Given that left and right pursue different policies in so many other areas, the penumbra in the literature is surprising. Whether public policy produces meaningful results for citizens is an important question for the quality of governance. The finding that left and right are performing equally well (or equally poorly, as the case is for education quality in Latin America) deserves greater attention in future research.

Parties in Latin America Previous work on Latin America has established a connection between partisan ideology and a variety of policy outcomes: market reforms (Gibson 1997; Murillo 2009); tax revenue (Hart 2010); regulatory regimes (Murillo 2009); privatization (Doyle 2012); social policy (Madrid, Hunter, and Weyland 2010); and education system decentralization (Murillo 1999). Murillo's findings in particular contribute to the expectation that left and right should diverge on education policy and makes it all the more surprising that I find convergence in this area. This study does not negate any of these previous findings, but rather extends our knowledge of the conditions under which partisan ideology will and will not matter for policy creation. A null finding here seems to confirm the claim by Wilensky (1975, p. 3) that "education is special" and should be incorporated into our understanding of partisan politics in the region.

This study also contributes to a broad literature on the left and right in Latin America. Ameringer (1992), Ames (1995), Mainwaring and Scully (1995), Coppedge (1997), Luna and Zechmeister (2005), Mainwaring and Torcal (2006), and Mainwaring (2016) all offer important insight into the party systems across the region. Equally, volumes on the left (Levitsky and Roberts 2011b; Weyland, Madrid, and Hunter 2010) and right (Luna and Kaltwasser 2014) in Latin America provide a valuable assessment of the evolution and status of left and right as well as sketching out an outline for future research on this topic. This study contributes greater nuance to our understanding on a policy area in which the two sides of the political spectrum have converged. This happens despite strong expectations that they should not, given that views on inequality are the foundational difference between left and right (Bobbio 1996; Luna and Rovira Kaltwasser 2014) and education is viewed as crucial for enhancing equity (The World Bank 1995).

Education policy and development The project does not focus on the specifics of education policy. It does not ask which policies are most effective or the conditions under which certain policies are most likely to succeed. A rich literature on education policy already

exists for this purpose (see, e.g., The World Bank 2018; Busso et al. 2017; Bassi et al. 2012; OECD/ECLAC/CAF 2016). Yet this project can contribute to the education policy and development literature. The finding of convergence and exploration of the factors that produce it are important to understand for those seeking to promote any specific education policies. This project also contributes to an understanding of the barriers (and potential catalysts) to successful implementation of education policy.

The Chilean case also speaks very directly to international education policy debates. The neoliberal system put in place under the military regime implemented many of the policies that were included in both the finance-driven and competitiveness-driven recommendations from international experts. Despite having left these structures in place for decades, Chilean education continues to lag behind its OECD peers and has yet to resolve entrenched inequalities. Chile is a cautionary tale in that whatever merits these recommendations may have, they are not sufficient to lift students across the region to competitive world levels.

At the same time, Chile also speaks to implementation strategies for these same policies. Whereas decentralization and privatization were implemented unilaterally under the military regime, merit pay was introduced gradually not only under democracy, but under left administrations. Further, this policy was accepted by the teachers' unions and ultimately embraced by many rank-and-file teachers, due to the gradual, negotiated approach by the government. This is not a novel finding, but this study does reinforce the arguments by Grindle (2004) and others that such a strategy can create space for surprising reforms.

Chilean education and politics Education in Chile has received significant attention from researchers. Looking at primary and secondary education, García-Huidobro (2000), Cox and Lemaitre (1999), Bellei (2001), Niedzwiecki and Pribble (2017), Redondo, Descouvières, and Rojas (2004), Gauri (1998), and Torche (2005) all provide valuable contributions assessing the content and effects of Chilean education policies. Similarly, Farrell (1986) looks at the role that education played in the military coup and Matamoros Fernández (2017) considers

the role of education during the military regime. Other researchers have examined in great detail the student protests (primarily) of 2006 and 2011 (Palacios-Valladares 2017; Palacios-Valladares and Ondetti 2018; Disi 2018; UNICEF 2014). The Chilean political system has also received significant attention. Studies on Chilean parties and party politics (Siavelis 2014; Carey 1999; Nohlen 2005; Luna 2018) built a substantial base of knowledge in this area. This project extends the knowledge from these two large bodies of work combining the political and education aspects. It also takes advantage of the longer historical view provided by an additional two decades of democratic rule to build on the excellent studies of the 1990s.

Where previous studies had only leftist governments to study, the alternation in power since 2010 opened the possibility of exploring these questions in a fuller context. Specifically, I am able to look at the effect of legacies of the left on right governments. Where previous studies could see only the left working within a framework created by the right, a study published in 2019 can generate a more complete picture of convergence between the two ends of the political spectrum.

Beyond Latin America This study has focused on Latin America generally and Chile in particular. Its findings may be relevant for the study of the politics of education in the United States as well, however. Recent publications have noted that similarities between the higher education systems of the United States and Chile make it a better point of comparison for questions about higher education funding than European countries (Delisle and Bernasconi 2018). Both systems rely heavily on private provision of education that is financed by student debt, rather than the state. Other similarities contribute to the belief that Chile could serve as an instructive lesson for the United States. First, the United States also underperforms in education relative to its levels of development and investment in education (OECD 2017). Second, there is an increasing partisan divide on all policy areas, including education (the Common Core curriculum (Henderson and West 2015) or higher

education (Doherty and Kiley 2019), for example). Third, the debate in the United States over education, particularly higher education, has become intimately tied with concerns over increasing and persistent inequalities (Fain 2019). With these commonalities, the lessons contained within this project on the political forces that limit policymakers' ability to reform education may also be relevant in the context of the United States.

6.4 Future Research and Concluding Remarks

This project has contributed to questions about the relationship between partisan ideology of the executive and education outputs and outcomes. It focused narrowly on spending, enrollment, completion, transition, repetition, and dropout rates as measures of access and test scores as a measure of quality while ignoring larger questions about other education outcomes. Specifically, it does not address citizenship outcomes — does the ideology of the government affect what kind of national values, state history, or *how* students are learning these things? I argued that states are loathe to surrender any of their real power in education precisely because of the connection between education and citizenship formation. There exists a deep literature in the sociology of education about the role that education plays in perpetuating socio-economic and political power (e.g. Althusser 1971; Freire 1996; Bowles and Gintis 2011; Marginson 1999; Wolff 2005). But do left and right produce different types of citizens or do the convergent forces act in this area as well? Future research should investigate this question.

Similarly, previous work (see, e.g. Farnen and Meloen 2000) has examined the relationship between education and individual-level behavior that supports democracy. Others have argued that the political right (even in democracy) tends to correlate with authoritarian attitudes (Altemeyer 1996; Duckitt et al. 2010). What, then, is the relationship between education under left or right and pro-democratic behaviors and attitudes? These are some of the long-term goals and outcomes of education. In terms of short-term outcomes, more work needs to be done to explore their relationship between partisan ideology. I found that

there is very little relationship between partisan ideology and measures of access (enrollment, completion, transition, dropout, or repetition rates), or quality (test scores). Does this finding hold in other regions, particularly in the OECD where partisan ideology *is* related to spending?

Equally, this project does not investigate the connection between partisan ideology and curriculum generally. There exists a wealth of studies that look at this question in the context of individual countries (e.g. Runhare and Muvirimi 2017; Journell 2010; Stinson 2007; Kelly-Woessner and Woessner 2008; Niemi and Niemi 2007). Yet no comprehensive theory exists connecting partisan ideology and curriculum design. Efforts to rewrite curriculum are costly and time-consuming endeavors and often politically charged (Pring 1986). Those subjects most connected with citizenship formation often fall into this area, but the United States has demonstrated that even subjects like science can become the targets for partisan fights. As an additional impetus to study this question separately, curriculum development can behave differently vis-à-vis bureaucracies and legacies. The drafting process is often lengthy, but an incomplete curriculum design could be overturned effortlessly by a new administration. Curriculum is also a policy that can be very low cost to change, but also an area where on the ground implementation can be derailed by dissatisfied teachers (Payne 2008; Hess 1999). Future work should consider what role partisan ideology plays in the design and implementation of school curriculum.

This project focused on the question of partisan ideology and education outputs and outcomes in the context of Latin America and specifically the case of Chile. Future research might productively explore whether these findings hold in other developing regions or at the subnational level in federal countries. As noted, Chile is an extreme case and if partisan ideology cannot explain any variation in education outputs or outcomes there, then it is unlikely to be able to do so anywhere. However, the factors that make Latin America unique as a region, notably its high and persistent levels of inequality, may mean that the dynamics of education are distinct in other regions (Huber et al. 2006). Additional cases, particularly

in other regions, could contribute to a confirmation of my theory.

Exploring these questions in additional cases would also open the possibility of testing the convergent forces for necessity and sufficiency (Braumoeller and Goertz 2000). I have argued that all three forces — policy legacies, stakeholder pressures, and expert advice — matter in the Latin American context. Are all three necessary? Are policy legacies alone sufficient to produce convergence? Approaching this question in other policy areas could also contribute to answering these questions and to defining the scope conditions of this theory. I argued that education policy is unique in several key ways — there are no educational "emergencies," education is a human right, and education is sequential and cumulative. Do these unique features limit the theory of convergence to education policy or is it more broadly applicable? The forces themselves are not unique to education policy, leading me to hypothesize that they act in similar ways on other policy areas. This hypothesis should be tested in future work.

A related future research question focuses on education systems in the wake of transitions between democratic and non-democratic governments. The Chilean case hints at the some of the changes that took place both in the wake of the military coup and, in greater detail, those that occurred after the return to democracy. How do legacies from one system constrain the actions of another? Are legacies left by authoritarian governments more enduring than those left by democracies? By its nature an authoritarian government should be less bound by policy legacies and stakeholder pressures than a democratic one. Yet these governments are not completely free of the forces of path dependence, bureaucratic inertia, or public opinion. Equally, education tends to generate individual-level behaviors and attitudes believed to be positive for democracy (Farnen and Meloen 2000). How enduring, then, are education policies after a transition away from democracy?

Finally, future research may also explore the question of what factors can help politicians extend their time horizons. One of the central obstacles to education reform discussed is that policy in this area is likely to inflict short term costs but return only long term

benefits. Convergence may provide some ground for politicians to overcome this problem (as suggested above), but what other elements can contribute to this solution? Under what conditions can politicians overcome their naturally short time horizons? We generally assume that because of the election cycle, politicians will avoid tackling problems that present long term benefits and short term costs. Yet we also observe exceptions to this. In 2018 the city of Austin, Texas, for example, approved a 100-year plan for dealing with water resources. There are parallels between this case and the education policies considered here — the plan was adopted when water was considered a salient issue, though not an "emergency" (the historic drought in Central Texas that lasted 2008–2016 had passed and water reserves had returned to normal levels); water policy involves a network of laws at different levels of government; crucial aspects are beyond the control of legislators (e.g. rain or existing water tables); and solutions involved significant short-term costs with the promise of only long-term benefits. Future work linking episodes in which lawmakers appear to extend their time horizons significantly with policy that seems to have converged could generate lessons for policymakers.

Education has far reaching effects on individual lives and society as a whole. Research demonstrates that at the individual level, increased education can provide upward mobility and is crucial for integral human development. Equally, organized education is a fundamental component of citizenship formation — states build their futures in classrooms. For these reasons, there exists an intimate connection between education and politics. Yet political science is only now starting to consider seriously education as a research topic. This study contributes to our understanding of this relationship by demonstrating that there is only a weak relationship between partisan ideology and education outputs and outcomes. Instead, a combination of political forces — policy legacies, stakeholder pressures, and expert advice — drive parties toward policy convergence. As states look forward for new ways to improve their education systems and continue their development, an understanding that partisan positions are unlikely to succeed may help advance dialogues and move more quickly toward

solutions that work.

Appendices

Appendix A

Acronyms and Abbreviations

ACE: Sistema de Aseguramiento de la Calidad de la Educación — Education Quality Assurance System [Chile]

ANER: Adjusted net enrollment rate

ARENA: Alianza Republicana Nacionalista — Nationalist Republican Alliance [El Salvador]

CCT: Conditional Cash Transfer program

CEPAL: Comisión Económica para América Latina y el Caribe — United Nations Economic Commission for Latin American and the Caribbean (ECLAC)

ENU: Escuela Nacional Unificada — National Unified School [Chile]

ETR: Effective transition rate

FA: Frente Amplio — Broad Front Party [Uruguay]

DC: Demócrata Cristiana — Christian Democrat [Party] [Chile]

IDB: Inter-American Development Bank

ISCED: International Standard Classification of Education

LAPOP: Latin American Public Opinion Project

LGE: Ley General de Educación — General Education Law [Chile]

LOCE: Ley Orgánica Constitucional de Educación — Organic Constitutional Education Law [Chile]

MAR: Missing at Random

MAS: Movimiento al Socialismo — Movement toward Socialism [Bolivia]

MCAR: Missing Completely at Random

MDGs: Millenium Development Goals

MECE: Programa de Mejoramiento de la Calidad de la Educación (Básica/Rural/Media) — (Primary/Rural/Secondary) Education Quality Improvement Program [Chile]

Mineduc: Ministerio de Educación — Ministry of Education [Chile]

OECD: Organization for Economic Development

PAN: Partido de Acción Nacional — National Action Party [Mexico]

PCCh: Partido Comunista de Chile — Communist Party of Chile [Chile]

PCV: Partido Comunista de Venezuela — Venezuelan Communist Party [Venezuela]

PISA: Program for International Student Assessment

PPD: Partido por la Democracia — Party for Democracy [Chile]

PRI: Partido Revolucionario Institucional — Institutional Revolution Party [Mexico]

PS: Partido Socialista — Socialist Party [Chile]

PSDB: Partido da Social Democracia Brasileira — Brazilian Social Democracy Party [Brazil]

PSU: Prueba de Selección Universitaria — University Selection Exam [Chile]

PT: Partido dos Trabalhadores — Worker's Party [Brazil]

RN: Renovación Nacional — National Renovation [Party] [Chile]

SEP: Ley de Subvención Escolar Preferencial — Preferential School Subvention Law [Chile]

SIMCE: Sistema de Medición de la Calidad de la Educación — Education Quality Measurement System [Chile]

SNED: Sistema Nacional de Evaluación del Desempeño — National Performance Evaluation System [Chile]

UDI: Union Democrática Independiente — Independent Democratic Union [Party] [Chile]

UNESCO: United Nations Educational, Scientific and Cultural Organization

Appendix B

Comparison with the OECD

Given previous findings that partisan ideology is a predictor of education spending in OECD countries, it is worth exploring how these results compare directly with those in Latin America. This appendix shows results on models of both outputs and outcomes. The models in this appendix are as close as possible to those presented in the main text. Where differences exist they are described below and are driven by both theory and data.

I show that in the OECD, as in Latin America, the left spends *slightly* more on secondary education than the right, but this difference is substantively small. Similarly, the right spends *slightly* more on capital expenditures than the left. Unlike in Latin America, I find that parties on the *right* spend more on tertiary education than the left. There are no meaningful differences between left and right on any education outcomes.

B.1 Data

In the OECD sample I use the Comparative Manifestos Project (CMP) left-right composite index (RILE) (Lehmann et al. 2015). This index puts all parties onto a one-dimensional scale that runs from -100 on the left to $+100$ on the right.

It is not possible to use RILE in the Latin American sample for a direct comparison of results because coverage in the region is still highly limited. Similarly, it is not possible to use the Baker and Greene party measure on the OECD sample as they only classify Latin American parties. While there are left/right party coding schemes that exist for a wider range of countries, using them would require the assumption that parties in the same family share preferences about education spending. This assumption holds in the regional context, but is much more tenuous at the world level (Mair and Mudde 1998). Additionally,

other coding schemes do not map onto Baker and Greene's directly. These authors calculate ideology based on an expert survey from Wiesehomeier and Benoit (2009). Experts in this survey coded parties and politicians based on positions on specific policy areas. This approach provides a number of benefits, but makes the resulting codings extremely difficult to translate directly onto any other coding system.

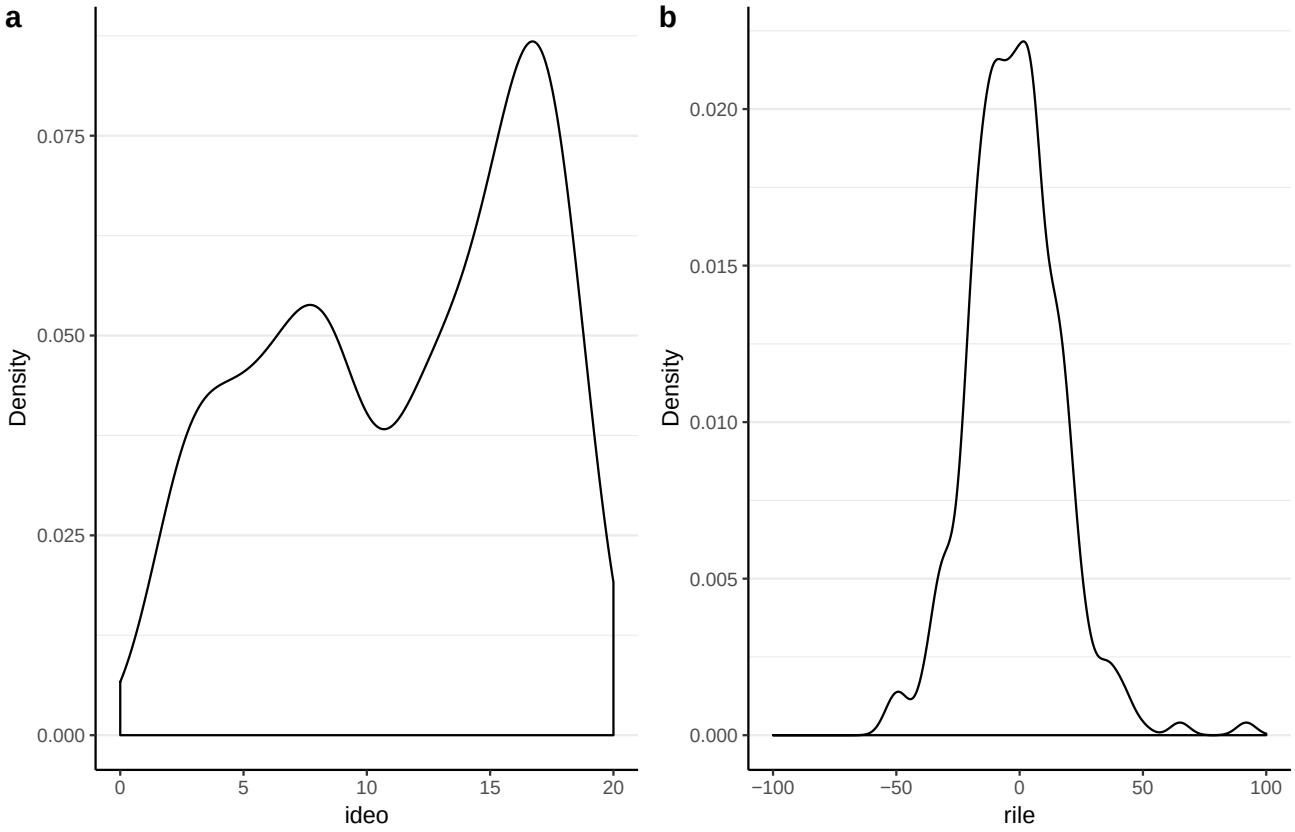

Figure B.1: Party-Year Observations. Subplot (a) shows observations in the Latin American sample. Subplot (b) shows the density of observations by RILE in the OECD sample.

Figure B.1 shows the relative prevalence of different party types in this dataset. The distribution of parties in Latin America is very different from those in the OECD. Center-right parties are the most common, though the center-left also has high representation — the distribution is clearly bimodal. The left tail is also fatter than the right. In the OECD, the distribution is fairly centered around the ideological center, although the center-left is

slightly more common than the center-right.[1] The extremes are uncommon in the OECD, where the extreme right is much further from the center than the extreme left. Differences between the distribution of political parties in each sample contributes to the claim that Latin America should be treated in a separate analysis, as is done in this project.

I do not include a control for external debt service in the OECD sample for two reasons. First, there is no theoretical reason for doing so. The control is important in Latin America because of the spending model pushed by the IMF and other lending agencies alongside their structural adjustment loans during the 1990s. Second, this data is simply unavailable because countries in the OECD do not, with few exceptions, take out these kinds of international loans.

Unlike Latin American countries, most OECD countries have parliamentary systems. To account for this, the right left index value is used for the party with the highest vote share in parliamentary systems. Similarly, the OECD models control for the percentage of seats in the parliament won by the party with the most seats.

B.2 Outputs

B.2.1 Results in the OECD

Table B.1 presents results from the OECD sample models. The negative coefficient at the secondary level suggests that the left spends more of its education budget on secondary education than the right. Conversely, the right appears to spend more of its education budget on tertiary education. These findings are largely in line with previous research on the OECD. The right also appears to devote greater resources to capital expenses.

Several statistically significant results bear brief examination. First, democracy is associated with higher levels of overall spending. This is in line with previous research. Second, school-aged population is positively correlated with staff expenditures, but negatively with capital and current expenses. These findings are intuitive — additional students require

[1] About 46% of the sample falls between -25 and 0, while about 39% falls between 0 and +25.

more teachers, but there are many efficiencies to achieve in terms of facilities and other consumable costs. Third, the significant and positive coefficients on primary and secondary aged populations in models 2 and 3, respectively, are also intuitively satisfying. The negative coefficient on tertiary aged population is surprising, however. Larger numbers of university-aged students, as a percentage of the population, would suggest greater demand for tertiary education and thus a greater share of education resources. There is no clear reason why we should see the opposite.

	Overall	Primary	Secondary	Tertiary	Staff	Capital	Current
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Ideology	$-3.03e^{-3}$	$-5.86e^{-3}$	-0.02^{*}	0.02^{**}	-0.02	0.02^{*}	$2.70e^{-3}$
	(-1.06)	(-0.77)	(-2.16)	(3.25)	(-0.97)	(1.97)	(0.19)
Polyarchy	14.81^{***}	5.76	-0.65	-13.83^{*}	10.03	-0.01	-15.50
	(5.17)	(0.76)	(-0.07)	(-2.03)	(0.63)	$(-1.0e^{-3})$	(-1.15)
GDP per capita	1.20	1.36	10.71^{***}	2.74	-2.48	-3.04	-1.24
	(1.30)	(0.64)	(4.03)	(1.51)	(-0.51)	(-1.21)	(-0.30)
Urbanization	3.75	-85.88^{***}	37.74	-37.74^{*}	32.74	-42.68^{**}	18.04
	(0.67)	(-5.42)	(1.83)	(-2.52)	(1.06)	(-2.65)	(0.70)
Previous Education	-1.51^{***}	-1.38	0.50	-0.02	3.12	-3.03^{*}	-0.80
	(-4.21)	(-1.23)	(0.34)	(-0.02)	(1.10)	(-2.05)	(-0.34)
Growth	0.12	-7.44^{**}	-4.04	6.03^{**}	0.54	1.32	0.28
	(0.13)	(-3.11)	(-1.26)	(2.85)	(0.11)	(0.53)	(0.07)
School-aged Population	0.04				22.67^{***}	-7.84^{**}	-22.58^{***}
	(1.19)				(3.93)	(-2.60)	(-4.65)
Primary-aged population		47.67^{***}					
		(7.83)					
Secondary-aged population			61.63^{***}				
			(7.63)				
Tertiary-aged population				-13.67^{*}			
				(-2.08)			
Total population	6.06^{***}						
	(3.77)						
Parliamentary share	-0.28	-1.56	-7.01^{*}	3.33^{*}	0.23	-3.53	5.36
	(-0.42)	(-0.76)	(-2.56)	(2.11)	(0.07)	(-1.93)	(1.81)
Total education spending		0.80	-3.12	0.08	-2.49	4.98^{**}	-2.57
		(0.60)	(-1.77)	(0.63)	(-0.86)	(3.32)	(-1.06)
Country dummies	✓	✓	✓	✓	✓	✓	✓
Time controls	✓	✓	✓	✓	✓	✓	✓
Observations	413	365	378	398	351	348	351
R^2	0.9457	0.9461	0.8675	0.9116	0.8328	0.8121	0.8608
F Statistic	153.3^{***}	142.2^{***}	53.64^{***}	84.85^{***}	36.53^{***}	31.38^{***}	45.36^{***}
Note:	*p<0.05; **P<0.01; ***p<0.001						

Table B.1: Spending models in OECD countries

Looking at the significant models, Figures B.2 plots the predicted secondary spending along the RILE spectrum. The magnitude of the effect across the full ideological spectrum is even smaller than for Latin America. This is unsurprising given the total variation in budgetary allotments (as shown in Figure 1.2).

The positive and significant coefficient on capital expenses suggests that the right is devoting greater education resources to this area. This finding has not been reported in the OECD previously. Additionally, previous education is significant in only two models: overall

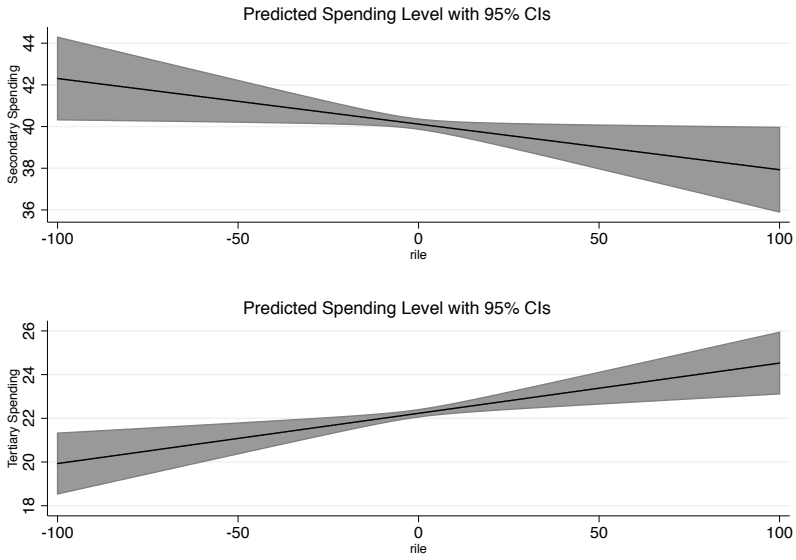

Figure B.2: Predicted spending levels for secondary and tertiary education. All covariates are held at their mean.

spending and capital expenses. In both cases the coefficient is negative, suggesting that more highly educated general populations result in lower education spending (and lower capital investment). One possible explanation for this is that in advanced industrial societies, more highly educated populations provide their children with greater cultural capital and other home-based resources that have been shown to improve school performance, thus relieving some of the burden from the state.

B.3 Outcomes

B.3.1 Access

The findings presented here are largely in keeping with those for Latin America: partisan ideology holds little, if any, explanatory power for differences in education outcomes. Models here are presented in three specifications, to allow comparison to both the Baker and Greene models of the primary analysis and the Rosas models in Appendix D. The only place where it is significant in the following models is in the maximum spec model for secondary completion rates. The substantive effect in this size is small, as in other models, but the overall model is

a poor fit and explains only a little over a third of the total variation. This, and the lack of other similar findings, supports the conclusion that there is no relationship between partisan ideology and education access outcomes.

	Primary			Secondary		
	Min	Base	Max	Min	Base	Max
Ideology	−0.008	−0.006	−0.014	−0.007	−0.004	0.003
	(−0.511)	(−0.356)	(−0.763)	(−0.240)	(−0.132)	(0.106)
Polyarchy			2.019			14.901
			(0.125)			(0.571)
GDP per capita		−0.501	−0.683		8.099	6.641
		(−0.195)	(−0.237)		(1.629)	(1.420)
Urbanization			−6.730			−12.796
			(−0.501)			(−0.522)
Average education			1.061			−0.383
			(1.078)			(−0.216)
Growth			28.912*			−10.808
			(2.400)			(−0.528)
Lower house share			0.011			−0.002
			(0.607)			(−0.056)
Term length		0.062	0.036		0.091	0.239
		(0.245)	(0.134)		(0.175)	(0.529)
Primary-aged population		−0.000	−0.000			
		(−0.386)	(−0.084)			
Secondary-aged population						−0.000
						(−0.482)
Time Controls	✓	✓	✓	✓	✓	✓
Country dummies	✓	✓	✓	✓	✓	✓
Observations	222	220	192	182	180	153
R^2	0.10	0.10	0.13	0.10	0.13	0.19
F Statistic	0.63	0.59	0.63	0.56	0.64	0.75

Note: *p<0.05; **P<0.01; ***p<0.001

Table B.2: Adjusted Net Enrollment Rates.

	Primary			Secondary		
	Min	Base	Max	Min	Base	Max
Ideology	−0.005	−0.004	−0.010	−0.093	−0.079	−0.164*
	(−0.129)	(−0.101)	(−0.223)	(−1.934)	(−1.496)	(−2.412)
Polyarchy			−42.228			−55.594
			(−0.962)			(−1.163)
GDP per capita		−10.044	−13.614		6.797	9.640
		(−1.873)	(−1.796)		(0.846)	(0.925)
Urbanization			121.576*			−19.890
			(2.172)			(−0.244)
Average education			2.097			2.277
			(1.017)			(0.648)
Growth			−5.738			7.909
			(−0.198)			(0.244)
Lower house share			0.028			0.068
			(0.563)			(1.041)
Term length		−0.003	0.014		0.294	0.042
		(−0.005)	(0.023)		(0.449)	(0.056)
Primary-aged population		−0.000	−0.000			
		(−0.483)	(−0.027)			
Secondary-aged population						0.000
						(0.064)
Time Controls	✓	✓	✓	✓	✓	✓
Country dummies	✓	✓	✓	✓	✓	✓
Observations	158	156	141	113	111	97
R^2	0.11	0.14	0.23	0.28	0.29	0.38
F Statistic	0.56	0.65	0.86	1.17	1.11	1.11

Note: *p<0.05; **P<0.01; ***p<0.001

Table B.3: Completion Rates.

	Min	Base	Max
Ideology	0.013	0.014	0.019
	(1.512)	(1.551)	(1.584)
Polyarchy			−4.440
			(−0.409)
GDP per capita		−2.513*	−2.245
		(−2.260)	(−1.193)
Urbanization			−28.147
			(−1.918)
Average education			0.986
			(1.203)
Growth			−1.709
			(−0.249)
Lower house share			−0.006
			(−0.513)
Term length		0.080	0.065
		(0.568)	(0.423)
Primary-aged population		−0.000	−0.000
		(−1.617)	(−0.690)
Secondary-aged population			
Time Controls	✓	✓	✓
Country dummies	✓	✓	✓
Observations	105	105	93
R^2	0.26	0.32	0.40
F Statistic	1.05	1.22	1.20

Note: *p<0.05; **P<0.01; ***p<0.001

Table B.4: Transition Rates.

	Primary			Secondary		
	Min	Base	Max	Min	Base	Max
Ideology	−0.014	−0.011	−0.002	0.046	0.057	0.091
	(−0.841)	(−0.625)	(−0.096)	(1.312)	(1.480)	(1.959)
Polyarchy			−1.792			48.294
			(−0.097)			(1.531)
GDP per capita		3.215	0.306		3.268	8.330
		(1.453)	(0.091)		(0.544)	(1.184)
Urbanization			−1.298			86.307
			(−0.052)			(1.235)
Average education			1.301			−3.847
			(1.305)			(−1.559)
Growth			1.196			−9.544
			(0.098)			(−0.434)
Lower house share			−0.010			−0.079
			(−0.453)			(−1.785)
Term length		0.044	0.084		0.220	0.235
		(0.174)	(0.315)		(0.439)	(0.460)
Primary-aged population		0.000	0.000			
		(0.781)	(1.157)			
Secondary-aged population						−0.000
						(−1.038)
Time Controls	✓	✓	✓	✓	✓	✓
Country dummies	✓	✓	✓	✓	✓	✓
Observations	129	129	118	113	113	102
R^2	0.14	0.17	0.20	0.35	0.36	0.46
F Statistic	0.62	0.67	0.60	1.64*	1.53	1.70*

Note: *p<0.05; **P<0.01; ***p<0.001

Table B.5: Dropout Rates.

	Primary			Secondary		
	Min	Base	Max	Min	Base	Max
Ideology	−0.007	−0.010	−0.012	−0.016	−0.020	−0.016
	(−0.756)	(−1.071)	(−1.072)	(−1.113)	(−1.260)	(−0.820)
Polyarchy			−9.071			5.582
			(−1.189)			(0.411)
GDP per capita		1.149	2.156		0.546	−1.123
		(1.032)	(1.143)		(0.228)	(−0.357)
Urbanization			34.148*			−4.216
			(2.651)			(−0.176)
Average education			0.192			1.397
			(0.262)			(1.213)
Growth			12.139*			18.546
			(2.104)			(1.785)
Lower house share			−0.001			−0.021
			(−0.196)			(−1.284)
Term length		−0.198	−0.220		−0.157	−0.143
		(−1.455)	(−1.638)		(−0.712)	(−0.597)
Primary-aged population		−0.000	−0.000			
		(−0.038)	(−0.010)			
Secondary-aged population						−0.000
						(−0.415)
Time Controls	✓	✓	✓	✓	✓	✓
Country dummies	✓	✓	✓	✓	✓	✓
Observations	94	94	83	113	113	101
R^2	0.40	0.43	0.58	0.32	0.32	0.40
F Statistic	2.06*	1.91*	2.43**	1.52	1.41	1.39

Note: *p<0.05; **P<0.01; ***p<0.001

Table B.6: Repetition Rates.

B.3.2 Quality

The results for quality are also in keeping with the findings from the Latin American sample: right parties perform at slightly higher levels than those on the left. Again, interpreting the meaning of the substantive size of the effect is difficult. Because the unit of analysis is a 15-year moving mean, a one unit change corresponds to a shift in ideology that persists for 15 years. Further, even though the rile variable runs from −100 to +100, when the 15 year moving mean is calculated, the range shrinks to approximately 12 to 20. This means that a one standard deviation change in PISA score would require a mean change in ideology outside of the observed range of means.

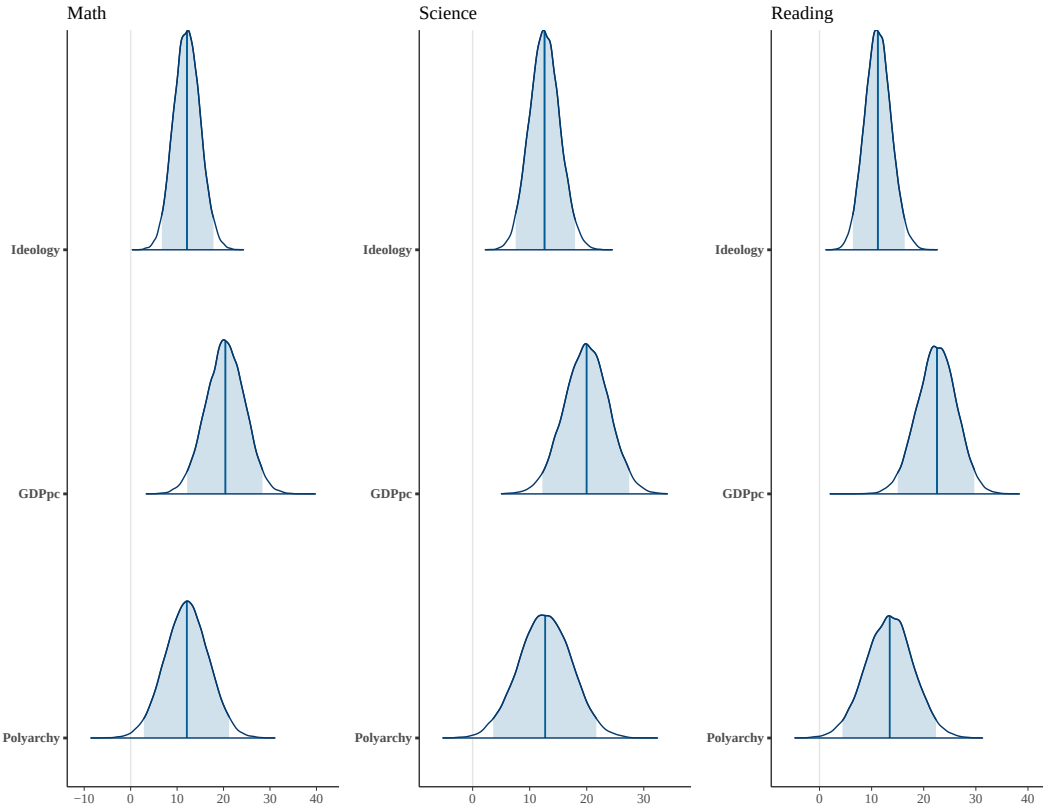

Figure B.3: Effect of party ideology on PISA scores — 15 year moving mean.

B.3.3 Equity

Equity of Access

	Primary			Secondary		
	Min	Base	Max	Min	Base	Max
Ideology	0.000	0.000	0.000	0.000	0.000	0.000
	(0.340)	(0.102)	(0.936)	(0.552)	(0.389)	(0.737)
Polyarchy			0.048			−0.216
			(0.836)			(−1.264)
GDP per capita		−0.023*	−0.018		−0.057*	−0.035
		(−2.012)	(−1.377)		(−2.087)	(−1.237)
Urbanization			0.091			−0.051
			(1.950)			(−0.321)
Average education			−0.002			0.000
			(−0.601)			(0.031)
Growth			−0.041			−0.073
			(−0.951)			(−0.579)
Lower house share			0.000			0.000
			(0.467)			(0.780)
Term length		−0.000	0.000		0.002	0.001
		(−0.008)	(0.261)		(0.836)	(0.448)
Primary-aged population		0.000	−0.000			
		(0.947)	(−0.761)			
Secondary-aged population						−0.000
						(−0.708)
Time Controls	✓	✓	✓	✓	✓	✓
Country dummies	✓	✓	✓	✓	✓	✓
Observations	190	188	160	172	170	143
R^2	0.08	0.13	0.18	0.11	0.16	0.23
F Statistic	0.44	0.62	0.77	0.57	0.79	0.87

Note: *p<0.05; **P<0.01; ***p<0.001

Table B.7: GPI: Adjusted Net Enrollment Rates.

	Primary			Secondary		
	Min	Base	Max	Min	Base	Max
Ideology	−0.000	−0.000	−0.000	0.000	−0.000	0.001
	(−0.921)	(−0.953)	(−1.012)	(0.312)	(−0.435)	(1.028)
Polyarchy			0.089			0.559
			(0.679)			(1.645)
GDP per capita		0.015	0.034		−0.057	−0.133
		(0.977)	(1.429)		(−0.896)	(−1.655)
Urbanization			0.096			−0.205
			(0.581)			(−0.289)
Average education			0.004			0.085*
			(0.742)			(2.498)
Growth			−0.036			0.457
			(−0.420)			(1.855)
Lower house share			−0.000			−0.000
			(−0.574)			(−0.472)
Term length		−0.001	−0.001		−0.008	−0.006
		(−0.555)	(−0.489)		(−1.489)	(−1.056)
Primary-aged population		0.000	0.000			
		(0.013)	(0.102)			
Secondary-aged population						0.000
						(1.028)
Time Controls	✓	✓	✓	✓	✓	✓
Country dummies	✓	✓	✓	✓	✓	✓
Observations	145	143	129	102	100	87
R^2	0.09	0.11	0.18	0.20	0.24	0.40
F Statistic	0.44	0.48	0.59	0.67	0.76	1.07

Note: *p<0.05; **P<0.01; ***p<0.001

Table B.8: GPI: Completion Rates.

	Min	Base	Max
Ideology	0.000	0.000	0.000
	(0.754)	(0.611)	(0.279)
Polyarchy			−0.168
			(−0.803)
GDP per capita		−0.018	−0.024
		(−0.507)	(−0.539)
Urbanization			−0.496
			(−1.605)
Average education			−0.025
			(−1.341)
Growth			−0.059
			(−0.396)
Lower house share			0.000
			(1.426)
Term length		−0.000	0.001
		(−0.000)	(0.181)
Primary-aged population		−0.000	0.000
		(−0.261)	(0.120)
Secondary-aged population			
Time Controls	✓	✓	✓
Country dummies	✓	✓	✓
Observations	103	103	93
R^2	0.44	0.44	0.49
F Statistic	2.41**	2.09**	1.82*

Note: *p<0.05; **P<0.01; ***p<0.001

Table B.9: GPI: Transition Rates.

	Primary			Secondary		
	Min	Base	Max	Min	Base	Max
Ideology	−0.006	−0.009	−0.000	−0.015	0.010	−0.020
	(−0.532)	(−0.793)	(−0.037)	(−0.518)	(0.346)	(−0.453)
Polyarchy			−3.041			−12.846
			(−0.270)			(−0.486)
GDP per capita		−0.151	−0.283		11.062*	14.144*
		(−0.103)	(−0.124)		(2.047)	(2.084)
Urbanization			4.368			0.672
			(0.248)			(0.010)
Average education			1.219*			−2.598
			(2.011)			(−0.929)
Growth			20.245*			−35.897
			(2.591)			(−1.715)
Lower house share			0.002			0.009
			(0.118)			(0.198)
Term length		−0.156	−0.031		0.401	0.245
		(−0.926)	(−0.175)		(0.944)	(0.515)
Primary-aged population		0.000	0.000			
		(0.638)	(0.503)			
Secondary-aged population						−0.000
						(−0.093)
Time Controls	✓	✓	✓	✓	✓	✓
Country dummies	✓	✓	✓	✓	✓	✓
Observations	115	115	104	84	84	74
R^2	0.06	0.08	0.21	0.29	0.36	0.44
F Statistic	0.23	0.25	0.60	0.96	1.19	1.07

Note: *p<0.05; **P<0.01; ***p<0.001

Table B.10: GPI: Dropout Rates.

	Primary			Secondary		
	Min	Base	Max	Min	Base	Max
Ideology	0.002	0.004	0.010	0.010	0.012	0.010
	(0.354)	(0.495)	(1.085)	(1.341)	(1.507)	(0.964)
Polyarchy			3.627			−12.465
			(0.563)			(−1.663)
GDP per capita		−0.884	−0.107		0.087	0.047
		(−1.118)	(−0.069)		(0.061)	(0.027)
Urbanization			13.986			5.103
			(1.401)			(0.416)
Average education			−0.021			−0.025
			(−0.030)			(−0.033)
Growth			−5.742			−8.016
			(−1.223)			(−1.486)
Lower house share			−0.004			0.011
			(−0.528)			(1.206)
Term length		0.153	0.135		0.089	0.043
		(1.491)	(1.194)		(0.743)	(0.319)
Primary-aged population		0.000	0.000			
		(0.983)	(0.618)			
Secondary-aged population						0.000
						(0.147)
Time Controls	✓	✓	✓	✓	✓	✓
Country dummies	✓	✓	✓	✓	✓	✓
Observations	81	81	71	100	100	89
R^2	0.12	0.18	0.29	0.43	0.43	0.50
F Statistic	0.38	0.51	0.61	2.23**	2.05**	1.86*

Note: *p<0.05; **P<0.01; ***p<0.001

Table B.11: GPI: Repetition Rates.

Equity of Quality

In contrast to the findings in Latin America, the OECD sample suggests that the *left* outperforms the right on the gender parity index for test scores! However, this is only true for math, while the other subject areas have 95% CIs that cross the 0 threshold. This finding deserves greater attention in future research.

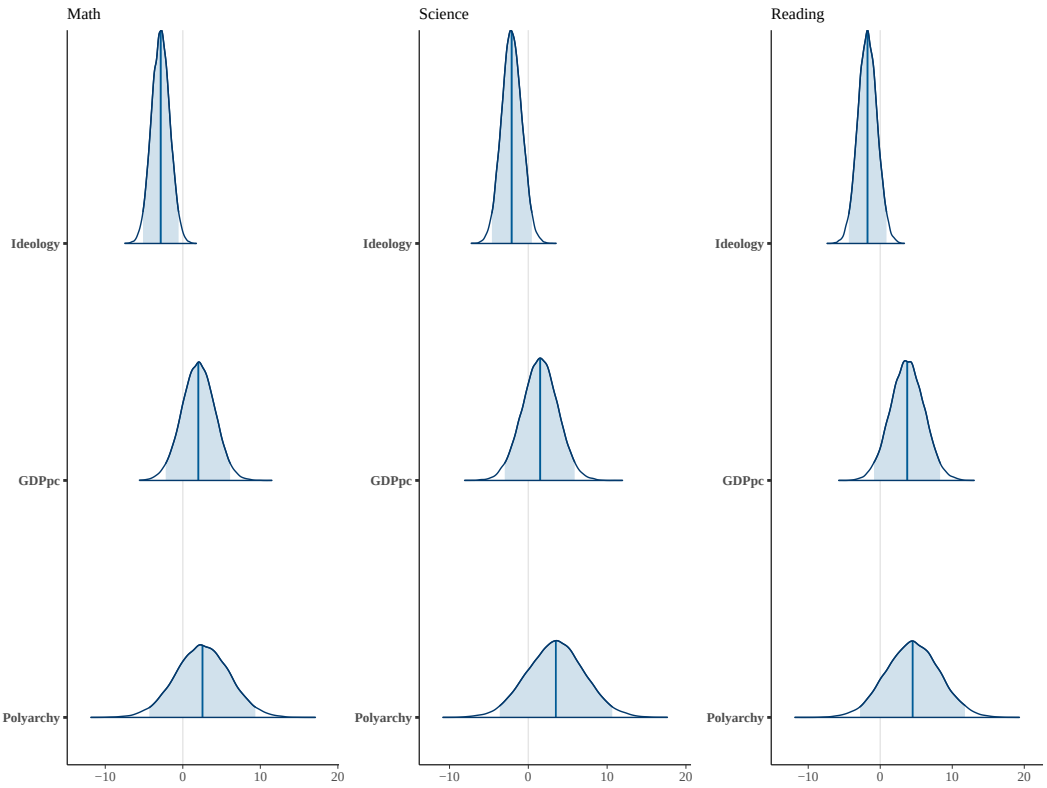

Figure B.4: Effect of party ideology on GPI for PISA scores — 15 year moving mean.

Appendix C

UNESCO Definitions of Education Levels and Areas

All definitions provided herein are taken verbatim from UNESCO Institute for Statistics (2012).

C.1 Levels

The United Nations Educational, Scientific and Cultural Organization (UNESCO) provides internationally comparable definitions of education levels called the International Standard Classification of Education (ISCED) (ibid.). These standards were first defined in 1997 and then updated in 2011 with a more comprehensive and granular scheme. The descriptions in this appendix all correspond to the 2011 definitions.

ISCED breaks education into nine levels, labeled ISCED level 0–8. These levels correspond to the following categories: early childhood, primary, lower secondary, upper secondary, post-secondary non-tertiary, short-cycle tertiary, bachelor's or equivalent, master's or equivalent, and doctoral or equivalent.

Table C.1 outlines the key definitional differences between the levels.

	Age & Duration	Mandatory	Content	Teacher Qualifications
0—Early Childhood Education	0–start of primary education; wide variation in years, but must be at least 2 hours/day for 100 days/year	Not typically	Visually stimulating and language rich learning environment; opportunities for play and development of motor skills	Pedagogically trained staff recommended but not required
1—Primary Education	Entry between ages 5 and 7, exit between ages 10 and 12; duration ranges from 4 to 7 years; 6 years is most common duration	Yes	Fundamental skills in reading, writing, and mathematics; fundamentals of learning and personal development	Teachers typically have pedagogical training in core subjects; Students typically spend all day with a single teacher
2—Lower Secondary Education	Typical entry between ages 10 to 13 after four to seven years of level 1 education	Yes	Builds on level 1; lays foundation for lifelong learning and development; sometimes includes a vocational component	Teachers typically have pedagogical training and often have subject knowledge training as well; Students may begin to have instruction from more than one teacher
3—Upper Secondary Education	Typical entry between ages 14 and 16; typical completion after a total of 12 or 13 years of instruction (cumulative years of levels 1–3)	Sometimes	Preparation for tertiary education, employable skills, or both	Pedagogical training plus higher specialization in subject instruction
4—Post-Secondary Non-Tertiary Education	Students who have completed secondary education; variable duration	No	Labor market skills and preparation; sometimes also additional preparation for entry into tertiary education	N/A
5—Short-Cycle Tertiary Education	Shorter duration than bachelor's degree programs	No	Occupation-specific training; potential entry into other tertiary programs; practical as opposed to theoretical training	N/A
6—Bachelor's or Equivalent	Entry often dependent on completion of level 3 education and entrance examinations; four year duration typical	No	First degree offered by universities; more theoretical than technical	At least some teaching staff must have level 8 qualifications
7—Master's or Equivalent	Variable length; entry often requires completion of level 6 or 7	No	Programs include a research component	Teaching staff have at least a level 7 qualification
8—Doctoral or Equivalent	Minimum 3 year duration; entry is often dependent on completion of level 7	No	Terminal degree providing advanced research qualifications; heavy research component; limited course work	

Table C.1: ISCED Levels

ISCED Level 1: Programmes at ISCED level 1, or primary education, are typically designed to provide students with fundamental skills in reading, writing and mathematics (i.e. literacy and numeracy) and establish a solid foundation for learning and understanding core areas of knowledge, personal and social development, in preparation for lower secondary education. It focuses on learning at a basic level of complexity with little, if any, specialisation.

Educational activities at ISCED level 1 (particularly in the early grades) are often organized around units, projects or broad learning areas, often with an integrated approach rather than providing instruction in specific subjects. Typically, there is one main teacher responsible for a group of pupils who organizes the learning process, although a class may have more than one teacher, especially for certain subjects or units.

Age is typically the only entry requirement at this level. The customary or legal age of entry is usually not below 5 years old nor above 7 years old. This level typically lasts six years, although its duration can range between four and seven years. Primary education typically lasts until age 10 to 12…Upon completion of primary education programmes, children may continue their education at ISCED level 2 (lower secondary education).

ISCED Level 2: Programmes at ISCED level 2, or lower secondary education, are typically designed to build on the learning outcomes from ISCED level 1. Usually, the aim is to lay the foundation for lifelong learning and human development upon which education systems may then expand further educational opportunities. Some education systems may already offer vocational education programmes at ISCED level 2 to provide individuals with skills relevant to employment.

Programmes at this level are usually organized around a more subject-oriented curriculum, introducing theoretical concepts across a broad range of subjects. Teachers typically have pedagogical training in specific subjects and, more often than at ISCED level 1, a class of students may have several teachers with specialised knowledge of the subjects they teach.

ISCED level 2 begins after four to seven years of ISCED level 1 education, with six years

of ISCED level 1 being the most common duration. Students enter ISCED level 2 typically between ages 10 and 13 (age 12 being the most common).

ISCED Level 3: Programmes at ISCED level 3, or upper secondary education, are typically designed to complete secondary education in preparation for tertiary education or provide skills relevant to employment, or both.

Programmes at this level offer students more varied, specialised and in-depth instruction than programmes at ISCED level 2. They are more differentiated, with an increased range of options and streams available. Teachers are often highly qualified in the subjects or fields of specialisation they teach, particularly in the higher grades.

ISCED level 3 begins after 8 to 11 years of education since the beginning of ISCED level 1. Pupils enter this level typically between ages 14 and 16. ISCED level 3 programmes usually end 12 or 13 years after the beginning of ISCED level 1 (or around age 17 or 18), with 12 years being the most widespread cumulative duration. However, exit from upper secondary education may range across education systems from usually 11 to 13 years of education since the beginning of ISCED level 1.

ISCED Level 5: Programmes at ISCED level 5, or short-cycle tertiary education, are often designed to provide participants with professional knowledge, skills and competencies. Typically, they are practically- based, occupationally-specific and prepare students to enter the labour market. However, these programmes may also provide a pathway to other tertiary education programmes. Academic tertiary education programmes below the level of a Bachelor's programme or equivalent are also classified as ISCED level 5.

Entry into ISCED level 5 programmes requires the successful completion of ISCED level 3 or 4 with access to tertiary education. Programmes at ISCED level 5 have more complex content than programmes at ISCED levels 3 and 4, but they are shorter and usually less theoretically-oriented than ISCED level 6 programmes.

Although ISCED level 5 programmes are usually designed to prepare for employment, they may give credit for transfer into ISCED level 6 or 7 programmes. Upon completion of these ISCED level 5 programmes, individuals may in some education systems continue their education at ISCED level 6 (Bachelor's or equivalent level) or long first degree ISCED level 7 programmes (Master's or equivalent level).

ISCED Level 6: Programmes at ISCED level 6, or Bachelor's or equivalent level, are often designed to provide participants with intermediate academic and/or professional knowledge, skills and competencies, leading to a first degree or equivalent qualification. Programmes at this level are typically theoretically-based but may include practical components and are informed by state of the art research and/or best professional practice. They are traditionally offered by universities and equivalent tertiary educational institutions.

Instruction at this level often takes the form of lectures by staff who are typically required to have attained ISCED levels 7 or 8 or have achieved experience as a senior professional in the field of work. Programmes at this level do not necessarily involve the completion of a research project or thesis, but if they do, it is less advanced, less independent or is undertaken with more guidance than those at ISCED level 7 or 8.

Entry into these programmes normally requires the successful completion of an ISCED level 3 or 4 programme with access to tertiary education. Entry may depend on subject choice and/or grades achieved at ISCED levels 3 and/or 4. Additionally, it may be required to take and succeed in entry examinations. Entry or transfer into ISCED level 6 is also sometimes possible after the successful completion of ISCED level 5. Upon completion of ISCED level 6 programmes, individuals may continue their education at ISCED level 7 (Master's or equivalent level), although not all ISCED level 6 programmes provide access to ISCED level 7. ISCED level 6 programmes do not usually give direct access to programmes at ISCED level 8 (doctoral or equivalent level).

C.2 Areas

Staff Expenditures: All staff (teacher and non-teachers) compensation expressed as a percentage of direct expenditure in public educational institutions (instructional and non-instructional) of the specified level of education. Financial aid to students and other transfers are excluded from direct expenditure. Staff compensation includes salaries, contributions by employers for staff retirement programmes, and other allowances and benefits. Divide all staff compensation in public institutions of a given level of education (ex. primary, secondary, or all levels combined) by total expenditure (current and capital) in public institutions of the same level of education, and multiply by 100.

Current Expenditures: Current expenditure expressed as a percentage of direct expenditure in public educational institutions (instructional and non-instructional). Financial aid to students and other transfers are excluded from direct expenditure. Current expenditure is consumed within the current year and would have to be renewed if needed in the following year. It includes staff compensation and current expenditure other than for staff compensation (ex. on teaching materials, ancillary services and administration). Divide all current expenditure in public institutions by total expenditure (current and capital) in public institutions, and multiply by 100.

Capital Expenditures: Capital expenditure expressed as a percentage of direct expenditure in public educational institutions (instructional and non-instructional). Financial aid to students and other transfers are excluded from direct expenditure. Capital expenditure is for education goods or assets that yield benefits for a period of more than one year. It includes expenditure for construction, renovation and major repairs of buildings and the purchase of heavy equipment or vehicles. Divide capital expenditure in public institutions by total expenditure (current and capital) in public institutions, and multiply by 100.

Appendix D

Alternative Party Codings and Model Extensions

As noted in the main text, I employ two other party coding systems in robustness checks of these results. Because they provide the highest coverage and the most recent data the Baker and Greene (2011) measure serves as the benchmark model. The first alternative is provided by Rosas (2005) and uses a similar continuous measure of party ideology. This variable is measured on a continuous scale from -2 on the left to $+2$ on the right. The Rosas measure of partisan ideology has inferior coverage, forcing models in the outputs analysis to use alternative specifications in order to reach statistical significance.

The second alternative typology and coding of political parties comes from Coppedge (1997) as extended by Huber and Stephens (2012) (referred to herein as the CHS coding and data). Using this coding makes the results more directly compatible with those in Huber and Stephens (ibid.), but are harder to compare with the continuous measures. In this coding system, parties are classified along two dimensions: a left-right dimension and a Christian or secular dimension. The former dimension has the following categories: left, center-left, center, center-right, right, other, and personalist. I exclude all "other" and "personalist" parties from the analyses. These exclusions have no effect on the outcomes.[1] In the analyses I also collapse Christian and secular parties into single categories (e.g. Christian center-left and secular center-left become, simply, center-left). Including these parties as separate categories, however, has no effect on the results.

In their extensions, Huber and Stephens (ibid.) include an alternative coding of the Peronist party in Argentina as secular center-left (as opposed to the "Other" category it is assigned in previous eras) for 2010–2012 because the party became more programmatically

[1] See Section D.1 below for a discussion of "other" and "personalist" parties in Latin America.

oriented. I adopt this coding as it reflects the dynamic nature of party politics and avoids dropping additional cases. All results presented below are robust to either specification.

I further convert the CHS codings into an interval variable. This is done for both theoretical and practical reasons. On the theoretical side, there is no clear category to withold in the regression analysis. Typically, the category with the most observations would be withheld. In this case, that would be the center-left. The consequence of this is that all coefficient estimates are in relationship to this category. Yet there is no reason to be interested in how the left or the center compares with the center-left and some of the categories have very few observations. Nor is there any reason to prefer a different party category for comparison. While it is possible to conduct a series of regressions witholding a different category each time, the results are neither intuitive nor informative. On the practical side, any categorical results are not comparable to the linear results from either the Baker and Greene or the Rosas-based variable analyses.

A consequence of converting from a categorical measure to an interval one is that it introduces an assumption that the spacing between party categories is constant. This assumption is almost certainly not met in this case. For this reason, the results from the CHS regressions should be treated with great care and are presented only to show that there is general agreement across all three datasets.

Baker and Greene's measure correlates with Rosas at 0.72. After converting the CHS measure to an interval variable, we can also correlate this with the primary measures — Baker and Greene with Coppedge: 0.20; Rosas with Coppedge: 0.25. It is unsurprising that the CHS codings correlate at a low level with the other measures given the different way in which party ideology is measured. It is encouraging, then, that the results from this alternative measure are in line with those from Baker and Greene and Rosas.

D.1 Personalist and Other Parties

In the reanalysis using the CHS coding, I exclude personalist and other parties for theoretical reasons. These parties do not fit onto a left-right dimension and they do not form a homogeneous group about which any meaningful conclusions can be drawn. Excluding them has no substantive effects on the results presented in the main text.

Of the 374 observations in the CHS data coding, 26 (7%) are classified as either "other" or "personalist." However, missingness on other variables means that excluding these parties generally decreases the model n by only 4–6 observations. Table D.1 summarizes where these observations occur.

	Argentina	Ecuador	Guatemala	Peru	Suriname	Venezuela
Other	5	0	0	0	0	0
Personalist	0	4	4	9	6	2

Table D.1: Country-year observations of personalist and other parties by country. All countries not listed have no observations in these categories.

From the codebook provided by Huber and Stephens (2012), these observations correspond to the following parties:

Argentina: Partido Justicialista

Ecuador: Partido Sociedad Patriótica

Guatemala: Frente Republicano Guatemalteco

Peru: Cambio 90, Peru Posible

Suriname: Nationale Democratische Partij

Venezuela: Convergencia Nacional, Movimiento Quinta República

D.2 Outputs

D.2.1 Results from Rosas

Given the high level of correlation between the Rosas measure and the benchmark from Baker and Greene, it should be no surprise that the results are nearly identical when this measure is used. As in the primary analysis, the only level at which ideology is significant is the secondary level. Again, the left spends more than the right here. Unlike Baker and

Greene, however, the Rosas measure does not suggest that there are any differences between left and right in terms of capital expenditures (or any other area). The restricted sample size may be responsible for this difference. Table D.2 presents a simplified view of the results. The models all have R^2 values and F-statistics that suggest they explain a high degree of variance and are a good fit for the data overall.

	Overall	Primary	Secondary	Tertiary	Staff	Capital	Current
Ideology	−0.046	−0.179	−0.643**	0.271	1.389	−0.527	−0.558
	(−0.310)	(−0.981)	(−2.696)	(1.389)	(1.421)	(−1.200)	(−0.633)
Debt Service	0.011						
	(0.513)						
Polyarchy	−3.721	21.246***	1.236	−4.268	−41.154	4.171	31.367
	(−0.820)	(3.561)	(0.191)	(−0.738)	(−1.472)	(0.350)	(1.246)
GDP per capita	0.198	−7.076	−7.904	6.016	74.307**	−14.815	−44.646
	(0.033)	(−0.991)	(−0.977)	(0.640)	(2.743)	(−1.169)	(−1.830)
Urbanization	−66.469	118.328	−39.537	16.180	68.405	−78.399	−8.738
	(−1.391)	(1.857)	(−0.512)	(0.176)	(0.209)	(−0.544)	(−0.030)
Average education	18.656**	−13.739*	9.405	−10.204	−83.109*	88.509***	−11.728
	(2.766)	(−2.030)	(1.212)	(−1.574)	(−2.116)	(5.635)	(−0.332)
Growth	4.359	0.847	6.265	−2.306	−5.148	4.133	5.112
	(1.277)	(0.167)	(1.105)	(−0.465)	(−0.283)	(0.506)	(0.312)
School-aged population (WB)	0.393						
	(1.412)						
School-aged population					−145.028	−76.315	198.886
					(−1.201)	(−1.430)	(1.829)
Total population	51.553						
	(1.715)						
Primary-aged population		100.136*					
		(2.168)					
Secondary-aged population			4.130				
			(0.043)				
Tertiary-aged population				15.830			
				(0.314)			
Lower house share	−1.189	1.616	−7.664*	−0.980	−2.585	0.925	6.076
	(−0.667)	(0.591)	(−2.443)	(−0.356)	(−0.239)	(0.184)	(0.623)
Overall education spending		3.535	1.213	−2.595	2.211	−0.612	−9.285
		(1.397)	(0.442)	(−1.079)	(0.194)	(−0.114)	(−0.904)
Time Controls	✓	✓	✓	✓	✓	✓	✓
Country dummies	✓	✓	✓	✓	✓	✓	✓
Observations	74	90	88	88	65	63	65
R^2	0.93	0.91	0.87	0.82	0.77	0.84	0.71
F Statistic	40.46***	35.23***	22.62***	15.70***	8.76***	11.59***	6.32***

Note: *p<0.05; **P<0.01; ***p<0.01

Table D.2: Analysis of spending in Latin America using the ideology coding provided by Rosas (2005)

D.2.2 Results from CHS

The results from the analysis using the Coppedge measure, presented in table D.3 vary only slightly from the other two sets of models. Because CHS measure ideology in such a different way, these results should be considered encouraging confirmatory evidence in favor of the conclusion that partisan ideology plays little role in determining education spending. As with the models using Baker and Greene's measure and the Rosas measure, the CHS models explain much of the variance in the data and the models are a good fit overall.

	Overall	Primary	Secondary	Tertiary	Staff	Capital	Current
Ideology	−0.110	−0.131	−0.672	−0.416	1.371	1.006	−0.668
	(−0.675)	(−0.476)	(−1.817)	(−1.346)	(1.085)	(1.779)	(−0.550)
Debt Service	−0.028*						
	(−2.202)						
Polyarchy	−0.721	−12.543	10.861	−23.589*	19.928	−3.894	43.923
	(−0.144)	(−1.307)	(0.861)	(−2.215)	(0.544)	(−0.237)	(1.248)
GDP per capita	−2.354	−23.305***	6.317	2.560	13.664	12.992*	−16.410
	(−0.650)	(−5.678)	(1.543)	(0.726)	(0.990)	(2.241)	(−1.237)
Urbanization	−12.443	−11.656	−127.873**	42.026	−84.879	43.734	45.201
	(−0.533)	(−0.381)	(−3.105)	(1.259)	(−0.502)	(0.678)	(0.278)
Average education	12.809***	−2.015	3.483	−12.767*	−56.369*	16.605	43.027*
	(3.610)	(−0.375)	(0.486)	(−2.064)	(−2.535)	(1.671)	(2.014)
Growth	2.288	6.629	−0.757	−9.049	38.940**	−7.980	−24.891
	(0.838)	(1.624)	(−0.141)	(−1.779)	(2.834)	(−1.177)	(−1.885)
School-aged population (WB)	−0.242						
	(−1.922)						
School-aged population					−27.275	−39.383	12.477
					(−0.553)	(−1.980)	(0.263)
Total population	−15.133						
	(−1.576)						
Primary-aged population		27.383					
		(1.711)					
Secondary-aged population			7.565				
			(0.308)				
Tertiary-aged population				47.220			
				(1.479)			
Lower house share	0.805	4.002	−7.965**	1.715	1.609	1.561	3.007
	(0.665)	(1.910)	(−2.886)	(0.734)	(0.203)	(0.453)	(0.395)
Overall education spending		2.637	−5.599*	7.842***	−17.662*	−2.856	11.401
		(1.321)	(−2.117)	(3.676)	(−2.309)	(−0.766)	(1.551)
Time Controls	✓	✓	✓	✓	✓	✓	✓
Country dummies	✓	✓	✓	✓	✓	✓	✓
Observations	167	171	172	173	126	125	126
R^2	0.85	0.91	0.81	0.82	0.64	0.53	0.54
F Statistic	31.00***	50.76***	21.05***	23.78***	6.37***	4.07***	4.20***

Note: *p<0.05; **P<0.01; ***p<0.01

Table D.3: Analysis of spending in Latin America using the ideology coding provided by Huber and Stephens (2008)

These results are also consistent with the main findings presented above. The coefficient on ideology at the secondary level is only significant at the $p < 0.069$ level, but it is still suggestive that the left spends slightly more than the right, albeit in substantively small amounts.

D.2.3 Bivariate Results

	Overall	Primary	Secondary	Tertiary	Staff	Capital	Current
Ideology	0.088	0.475^{***}	-0.028	-0.374^{***}	0.300	0.118	-0.317^{*}
	(1.707)	(4.551)	(-0.246)	(-4.124)	(1.845)	(1.323)	(-2.348)
Observations	222	207	205	205	159	162	159
R^2	0.01	0.09	0.00	0.08	0.02	0.01	0.03
F Statistic	2.91	20.71^{***}	0.06	17.00^{***}	3.41	1.75	5.51^{*}

Note: *p<0.05; **P<0.01; ***p<0.001

Table D.4: Spending by in Latin America. Bivariate results.

As noted in the main text, these results should not be considered to carry any substantive meaning. If a statistical model is a simplified view of the world and a data generation process, then these models are ones in which education spending is determined absent consideration of number of students, national economic situation, or current state of education development. A simplification of this kind is so extreme and unrealistic that a positive result has no meaning.

D.3 Outcomes

Reanalyzing the outcome models using different specifications of the ideology measure (for access models) and time (for quality measures) produces results substantively identical to those presented in the main text. Because Rosas has lower coverage of the ideology variable, total observations in most full specification models are reduced to the point where they cannot provide valid statistical inferences. In order to overcome this problem, I am forced to reduce the number of explanatory variables. The models presented below use a "baseline" specification in which the explanatory variables are ideology, GDP per capita, length of term, school aged population, along with controls for time and country dummies. Additional minimal specification models (using only ideology as a predictor) and a full specification (using all covariates but where the number of observations falls below 30) are included for comparison.

D.3.1 Access

	Primary			Secondary	
	Min	Base	Max	Min	Base
Ideology	0.404	0.486	1.828	−0.824	0.186
	(0.881)	(0.980)	(0.316)	(−0.951)	(0.230)
Polyarchy			187.057		
			(0.327)		
GDP per capita		−26.063	24.538		−22.338
		(−2.122)	(0.240)		(−1.013)
Urbanization			586.074		
			(0.268)		
Average education			−65.394		
			(−0.202)		
Growth			−78.653		
			(−0.368)		
Lower house share			−12.687		
			(−0.458)		
Term length		1.090	4.594		2.163
		(1.548)	(0.328)		(1.887)
Primary-aged population		0.000	0.000		
		(1.204)	(0.007)		
Secondary-aged population					
Time Controls	✓	✓	✓	✓	✓
Country dummies	✓	✓	✓	✓	✓
Observations	29	27	22	25	23
R^2	0.21	0.46	0.73	0.41	0.72
F Statistic	0.42	0.73	0.28	0.82	1.81

Note: *p<0.05; **P<0.01; ***p<0.001

Table D.5: Adjusted Net Enrollment Rates. Ideology is measured using Rosas classification. Secondary maximum model excluded because there are insufficient observations to identify the model.

	Primary			Secondary		
	Min	Base	Max	Min	Base	Max
Ideology	0.378	0.348	−1.394	0.963	1.846	2.168
	(0.286)	(0.219)	(−1.060)	(0.651)	(1.233)	(0.926)
Polyarchy			−169.452			−158.236
			(−1.616)			(−0.894)
GDP per capita		−7.373	−44.806		−45.029	−2.769
		(−0.205)	(−1.654)		(−1.134)	(−0.048)
Urbanization			−383.941			−1088.670
			(−0.963)			(−2.343)
Average education			27.003			69.447
			(0.396)			(0.802)
Growth			84.729			−143.086
			(1.256)			(−1.965)
Lower house share			45.844			25.444
			(1.937)			(0.688)
Term length		0.800	−2.746		4.478	7.656
		(0.349)	(−0.624)		(2.018)	(1.480)
Primary-aged population		0.000	−0.000			
		(0.560)	(−0.147)			
Secondary-aged population						−0.000
						(−1.547)
Time Controls	✓	✓	✓	✓	✓	✓
Country dummies	✓	✓	✓	✓	✓	✓
Observations	29	27	22	30	29	24
R^2	0.19	0.29	0.95	0.24	0.41	0.85
F Statistic	0.37	0.35	2.92	0.45	0.70	1.17

Note: *p<0.05; **P<0.01; ***p<0.001

Table D.6: Completion Rates. Ideology is measured using Rosas classification.

	Min	Base	Max
Ideology	0.317	0.244	1.076
	(0.535)	(0.368)	(0.695)
Polyarchy			3.040
			(0.024)
GDP per capita		13.640	59.153
		(0.712)	(1.828)
Urbanization			−425.947
			(−0.905)
Average education			43.422
			(0.496)
Growth			−72.041
			(−0.951)
Lower house share			8.215
			(0.309)
Term length		0.584	2.169
		(0.529)	(0.436)
Primary-aged population		−0.000	0.000
		(−0.178)	(0.946)
Secondary-aged population			
Time Controls	✓	✓	✓
Country dummies	✓	✓	✓
Observations	26	26	22
R^2	0.52	0.58	0.92
F Statistic	1.39	1.08	1.13

Note: *p<0.05; **P<0.01; ***p<0.001

Table D.7: Transition Rates. Ideology is measured using Rosas classification.

	Primary			Secondary		
	Min	Base	Max	Min	Base	Max
Ideology	−0.267	−0.110	−0.365	0.633	0.826	1.672
	(−0.426)	(−0.158)	(−0.252)	(0.989)	(1.095)	(0.924)
Polyarchy			70.027			15.921
			(0.666)			(0.075)
GDP per capita		−15.619	−24.746		−9.269	−12.529
		(−0.881)	(−0.771)		(−0.456)	(−0.218)
Urbanization			−808.615			−81.663
			(−1.635)			(−0.224)
Average education			104.234			16.701
			(1.242)			(0.188)
Growth			30.608			−37.568
			(0.669)			(−0.669)
Lower house share			−0.576			42.647
			(−0.025)			(1.239)
Term length		−0.129	−1.961		0.870	3.440
		(−0.122)	(−0.618)		(0.784)	(0.861)
Primary-aged population		−0.000	0.000			
		(−0.704)	(1.214)			
Secondary-aged population						−0.000
						(−0.103)
Time Controls	✓	✓	✓	✓	✓	✓
Country dummies	✓	✓	✓	✓	✓	✓
Observations	31	30	26	29	28	24
R^2	0.42	0.50	0.78	0.46	0.51	0.81
F Statistic	1.09	0.95	0.88	1.12	0.96	0.64

Note: *p<0.05; **P<0.01; ***p<0.001

Table D.8: Dropout Rates. Ideology is measured using Rosas classification.

	Primary			Secondary		
	Min	Base	Max	Min	Base	Max
Ideology	−0.283	−0.332	0.187	−0.506*	−0.524	−0.899*
	(−1.128)	(−1.237)	(0.556)	(−2.251)	(−2.066)	(−2.958)
Polyarchy			54.517			55.270
			(2.232)			(2.406)
GDP per capita		2.730	12.018		2.999	29.362*
		(0.399)	(1.612)		(0.427)	(3.929)
Urbanization			53.274			−27.097
			(0.464)			(−0.449)
Average education			−15.395			22.389
			(−0.789)			(1.992)
Growth			−0.915			25.151
			(−0.086)			(2.660)
Lower house share			−5.792			−10.777
			(−1.100)			(−2.245)
Term length		−0.621	−0.276		0.030	−2.126*
		(−1.530)	(−0.375)		(0.074)	(−3.165)
Primary-aged population		−0.000	0.000			
		(−0.995)	(0.892)			
Secondary-aged population						0.000*
						(4.238)
Time Controls	✓	✓	✓	✓	✓	✓
Country dummies	✓	✓	✓	✓	✓	✓
Observations	31	30	26	30	29	25
R^2	0.35	0.47	0.91	0.36	0.40	0.94
F Statistic	0.79	0.82	2.58	0.79	0.66	3.32

Note: *p<0.05; **P<0.01; ***p<0.001

Table D.9: Repetition Rates. Ideology is measured using Rosas classification.

Bivariate Analysis

D.3.2 Quality

Figures D.1 and D.2 show an alternative model specification in which 10 and 5-year moving means are used, respectively. The results are identical to the 15-year moving mean

	ANER	Completion	Transition	Dropout	Repetition
Ideology	0.010	−0.128	0.078	−0.158	−0.008
	(0.144)	(−0.876)	(0.712)	(−1.212)	(−0.161)
Observations	70	60	53	63	64
R^2	0.00	0.01	0.01	0.02	0.00
F Statistic	0.02	0.77	0.51	1.47	0.03

Note: *p<0.05; **P<0.01; ***p<0.001

Table D.10: Bivariate results using Baker and Greene measure of ideology.

	ANER	Completion	Dropout	Repetition
Ideology	−0.296	−0.247	−0.068	0.053
	(−2.001)	(−1.106)	(−0.691)	(1.121)
Observations	58	61	55	63
R^2	0.07	0.02	0.01	0.02
F Statistic	4.00	1.22	0.48	1.26

Note: *p<0.05; **P<0.01; ***p<0.001

Table D.11: Bivariate results using Baker and Greene measure of ideology.

presented in the main text. The right outperforms the left, but the substantive size of the effect is extremely small.

10 year moving mean

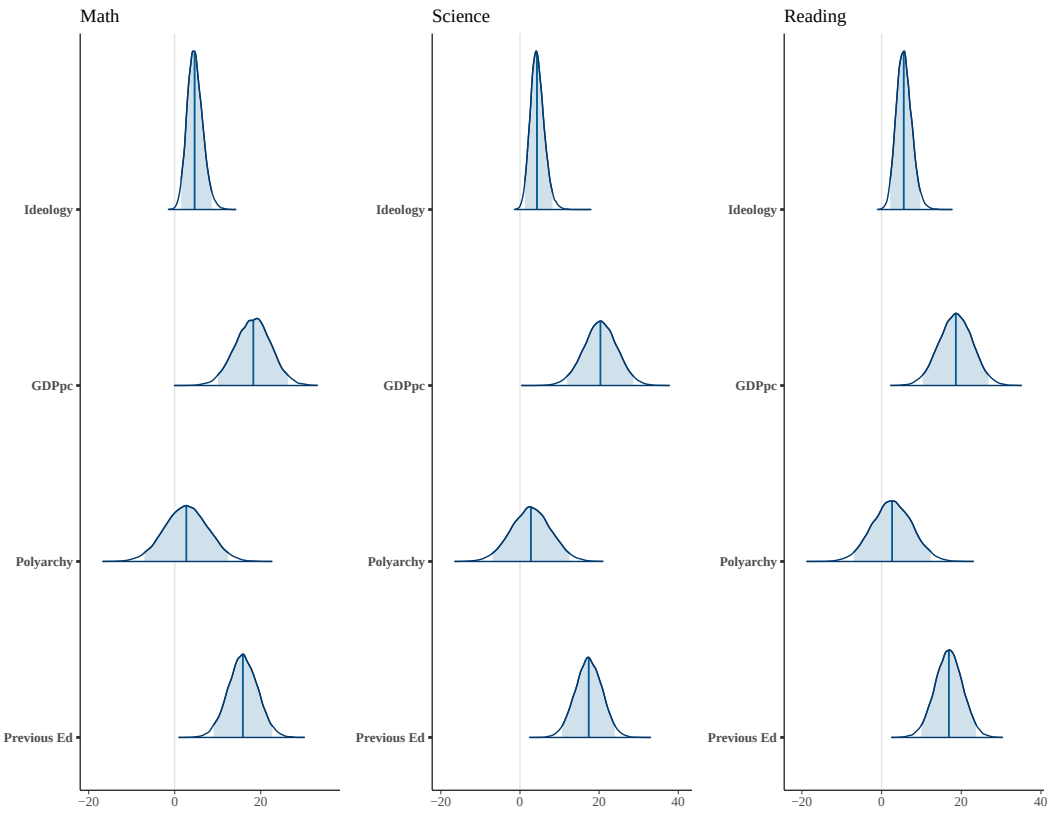

Figure D.1: Effect of party ideology on PISA scores — 10 year moving mean.

5 year moving mean

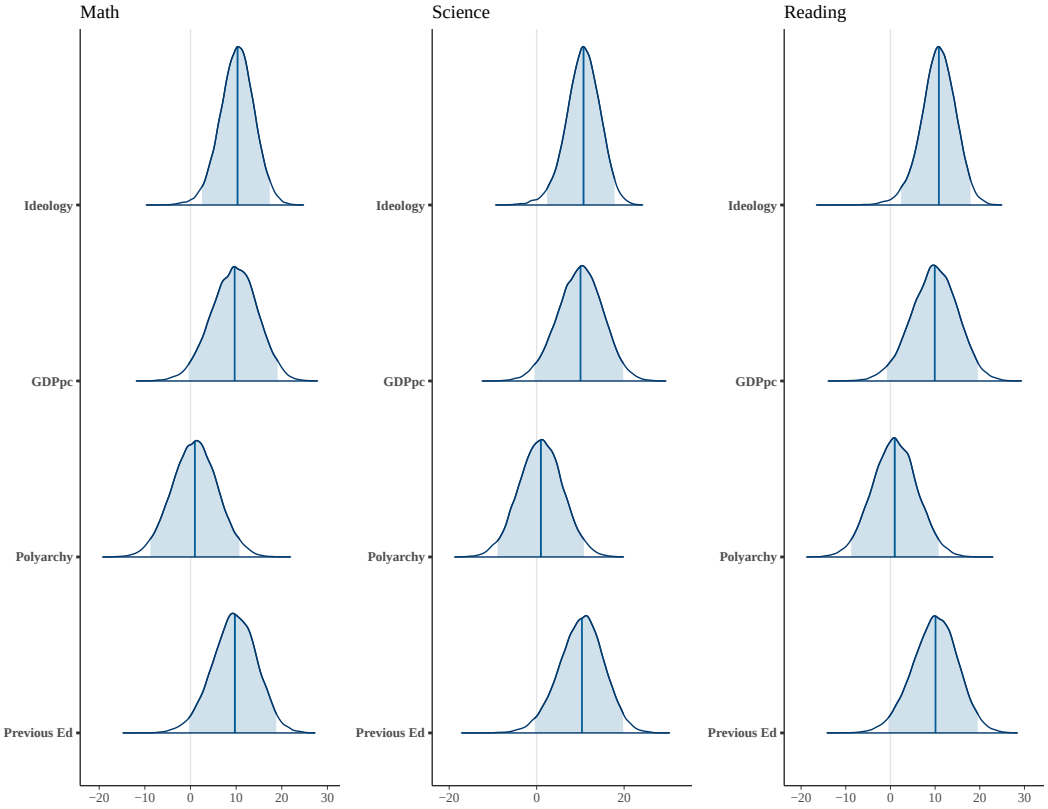

Figure D.2: Effect of party ideology on PISA scores — 5 year moving mean.

Highest Achievement

Figures D.3 and D.4 use percentile scores as the dependent variable. In the former, the outcome is the percentage of students scoring at the highest level of competency and in the latter it is percentage of students scoring at or above the 95th percentile. All results confirm the findings in the main analysis: the right outperforms the left in a statistically significant way, but the substantive size of the effect is very small.

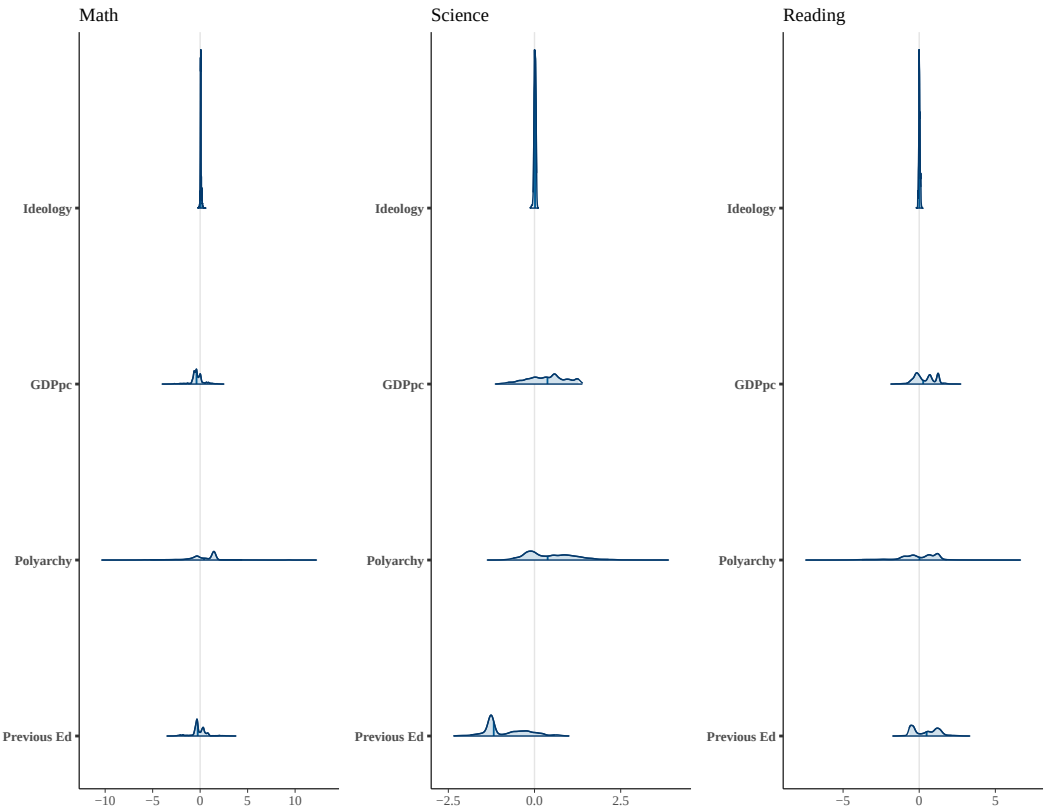

Figure D.3: Effect of party ideology on percentage of students scoring in the highest achievement category (Level 6).

95th Percentile

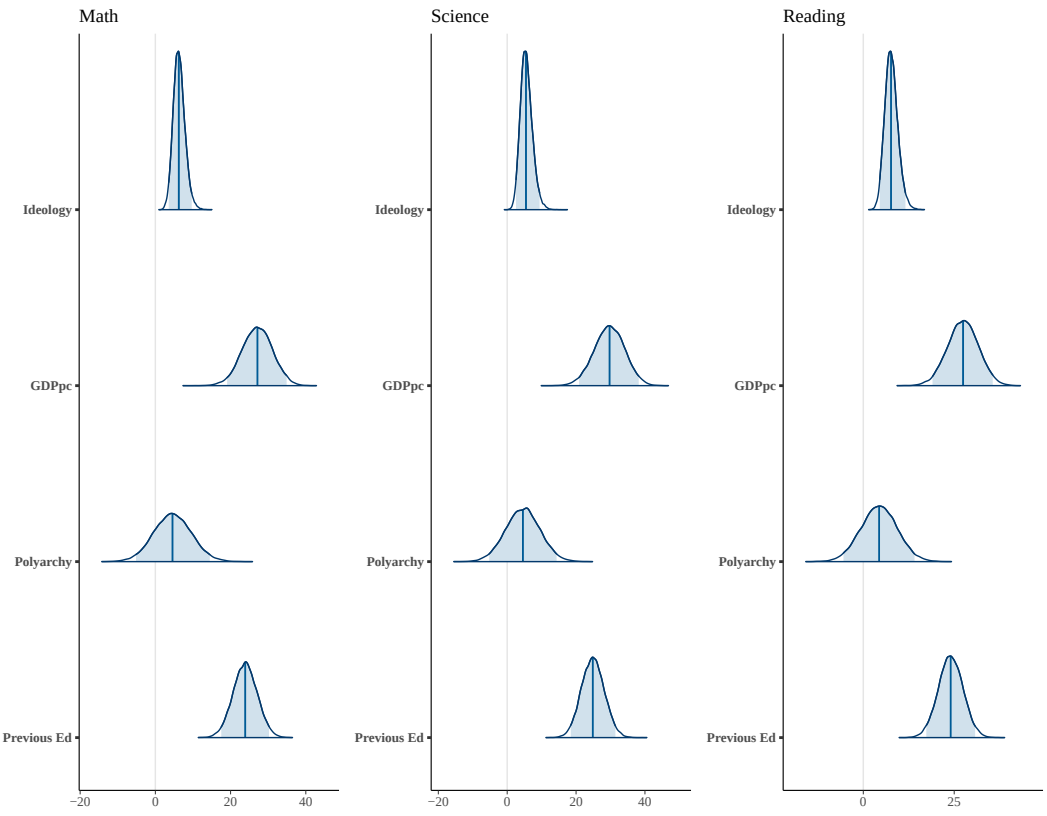

Figure D.4: Effect of party ideology on percentage of students scoring at or above the 95th percentile.

D.3.3 Equity

Equity of Access

	Primary			Secondary	
	Min	Base	Max	Min	Base
Ideology	−0.001	−0.001	0.004	−0.006	−0.008
	(−0.240)	(−0.203)	(0.143)	(−1.457)	(−1.413)
Polyarchy			0.603		
			(0.203)		
GDP per capita		0.019	−0.352		0.120
		(0.224)	(−0.664)		(0.822)
Urbanization			1.631		
			(0.144)		
Average education			−0.185		
			(−0.110)		
Growth			−0.149		
			(−0.135)		
Lower house share			0.201		
			(1.398)		
Term length		0.000	0.023		−0.005
		(0.059)	(0.316)		(−0.597)
Primary-aged population		0.000	−0.000		
		(0.020)	(−0.199)		
Secondary-aged population					
Time Controls	✓	✓	✓	✓	✓
Country dummies	✓	✓	✓	✓	✓
Observations	29	27	22	25	23
R^2	0.40	0.40	0.85	0.43	0.48
F Statistic	1.02	0.58	0.60	0.88	0.65

Note: *p<0.05; **P<0.01; ***p<0.001

Table D.12: GPI: Adjusted Net Enrollment Rates. Ideology is measured using Rosas classification. Secondary maximum model excluded because there are insufficient observations to identify the model.

	Primary			Secondary		
	Min	Base	Max	Min	Base	Max
Ideology	0.001	0.000	0.008	−0.006	−0.008	−0.003
	(0.446)	(0.115)	(1.565)	(−1.684)	(−1.960)	(−0.394)
Polyarchy			0.511			0.525
			(1.346)			(0.787)
GDP per capita		0.148	0.205		0.122	0.071
		(1.843)	(1.766)		(1.120)	(0.327)
Urbanization			2.252			2.094
			(1.260)			(1.195)
Average education			−0.321			−0.287
			(−1.058)			(−0.880)
Growth			−0.222			0.226
			(−1.343)			(0.823)
Lower house share			0.067			0.043
			(0.815)			(0.309)
Term length		−0.005	0.010		−0.008	−0.003
		(−1.129)	(0.829)		(−1.292)	(−0.164)
Primary-aged population		−0.000	−0.000			
		(−0.164)	(−0.104)			
Secondary-aged population						−0.000
						(−1.099)
Time Controls	✓	✓	✓	✓	✓	✓
Country dummies	✓	✓	✓	✓	✓	✓
Observations	32	30	25	30	29	24
R^2	0.35	0.48	0.85	0.40	0.47	0.82
F Statistic	0.85	0.87	1.49	0.95	0.90	0.95

Note: *p<0.05; **P<0.01; ***p<0.001

Table D.13: GPI: Completion Rates. Ideology is measured using Rosas classification.

	Min	Base	Max
Ideology	−0.003	−0.003	0.002
	(−0.977)	(−0.986)	(0.305)
Polyarchy			0.581
			(1.227)
GDP per capita		0.015	−0.173
		(0.143)	(−1.226)
Urbanization			4.270
			(1.993)
Average education			−0.597
			(−1.507)
Growth			0.065
			(0.343)
Lower house share			0.116
			(1.243)
Term length		−0.002	0.015
		(−0.282)	(1.168)
Primary-aged population		0.000	−0.000
		(0.421)	(−1.246)
Secondary-aged population			
Time Controls	✓	✓	✓
Country dummies	✓	✓	✓
Observations	28	28	25
R^2	0.28	0.30	0.79
F Statistic	0.48	0.34	0.74

Note: *p<0.05; **P<0.01; ***p<0.001

Table D.14: GPI: Transition Rates. Ideology is measured using Rosas classification.

	Primary			Secondary		
	Min	Base	Max	Min	Base	Max
Ideology	0.541	0.562	−0.236	−0.284	−0.066	−2.478
	(1.565)	(1.456)	(−0.795)	(−0.511)	(−0.099)	(−1.311)
Polyarchy			60.869			−149.302
			(1.957)			(−0.681)
GDP per capita		13.417	9.253		−8.640	−38.555
		(1.397)	(0.673)		(−0.510)	(−0.643)
Urbanization			−532.150*			322.667
			(−4.497)			(0.359)
Average education			78.276*			26.233
			(4.428)			(0.190)
Growth			10.512			74.376
			(1.092)			(1.202)
Lower house share			−13.719			−44.269
			(−2.737)			(−0.816)
Term length		−0.444	−1.821		0.700	−3.841
		(−0.870)	(−2.207)		(0.762)	(−0.961)
Primary-aged population		−0.000	0.000*			
		(−0.620)	(3.386)			
Secondary-aged population						0.000
						(0.768)
Time Controls	✓	✓	✓	✓	✓	✓
Country dummies	✓	✓	✓	✓	✓	✓
Observations	27	26	23	27	26	22
R^2	0.41	0.51	0.97	0.23	0.29	0.71
F Statistic	0.81	0.70	4.70	0.35	0.32	0.26

Note: *p<0.05; **P<0.01; ***p<0.001

Table D.15: GPI: Dropout Rates. Ideology is measured using Rosas classification.

	Primary			Secondary		
	Min	Base	Max	Min	Base	Max
Ideology	0.157	0.173	−0.250	0.352*	0.359*	0.312
	(1.409)	(1.446)	(−1.331)	(2.587)	(2.317)	(0.801)
Polyarchy			−26.573			−35.762
			(−1.943)			(−1.214)
GDP per capita		−3.356	−4.515		−1.345	−10.814
		(−1.099)	(−1.082)		(−0.314)	(−1.129)
Urbanization			−48.518			−24.599
			(−0.754)			(−0.318)
Average education			15.462			0.336
			(1.416)			(0.023)
Growth			5.193			−12.966
			(0.872)			(−1.070)
Lower house share			−1.140			1.769
			(−0.387)			(0.288)
Term length		0.238	−0.395		−0.027	0.628
		(1.314)	(−0.957)		(−0.111)	(0.730)
Primary-aged population		0.000	0.000			
		(1.470)	(0.550)			
Secondary-aged population						−0.000
						(−1.156)
Time Controls	✓	✓	✓	✓	✓	✓
Country dummies	✓	✓	✓	✓	✓	✓
Observations	31	30	26	30	29	25
R^2	0.19	0.35	0.81	0.45	0.48	0.78
F Statistic	0.34	0.51	1.04	1.16	0.91	0.70

Note: *p<0.05; **P<0.01; ***p<0.001

Table D.16: GPI: Repetition Rates. Ideology is measured using Rosas classification.

Equity of Quality

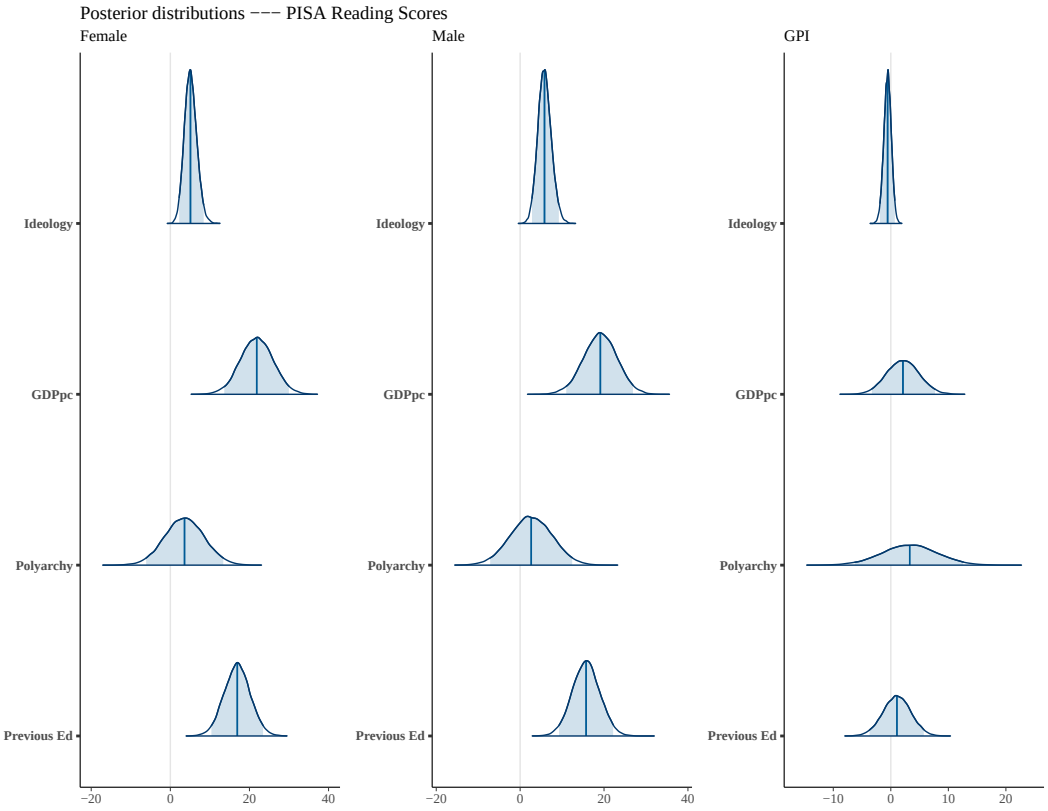

Figure D.5: Effect of party ideology on PISA reading scores by gender.

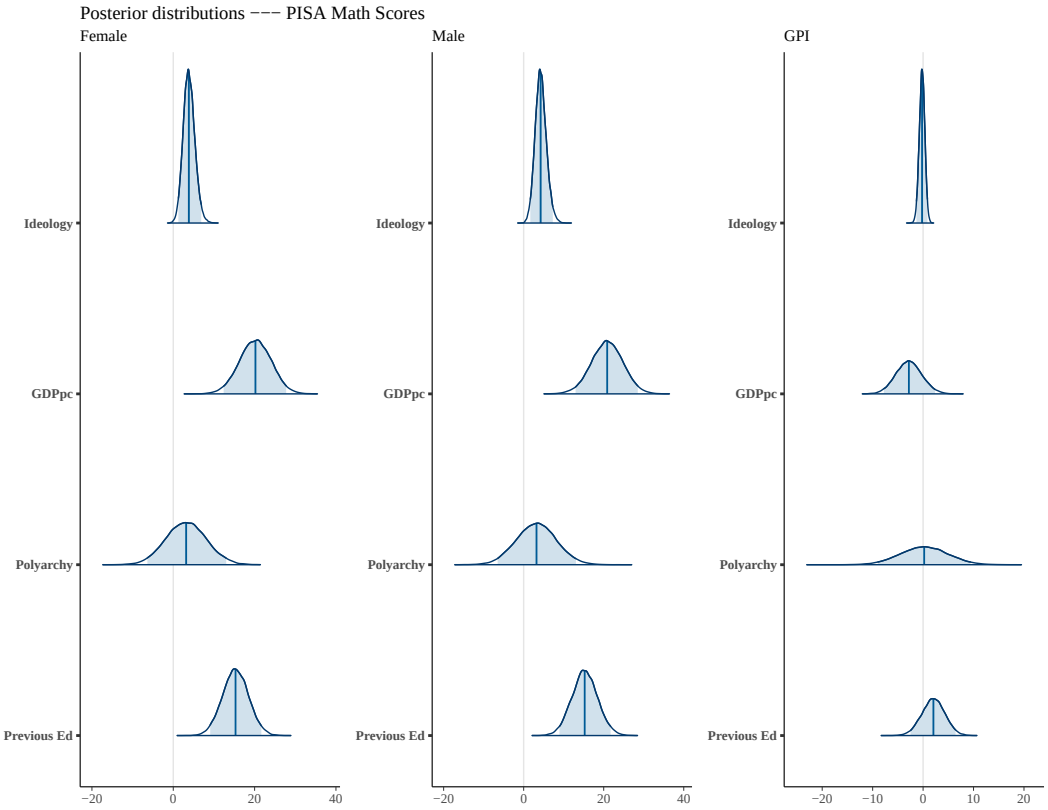

Figure D.6: Effect of party ideology on PISA math scores by gender.

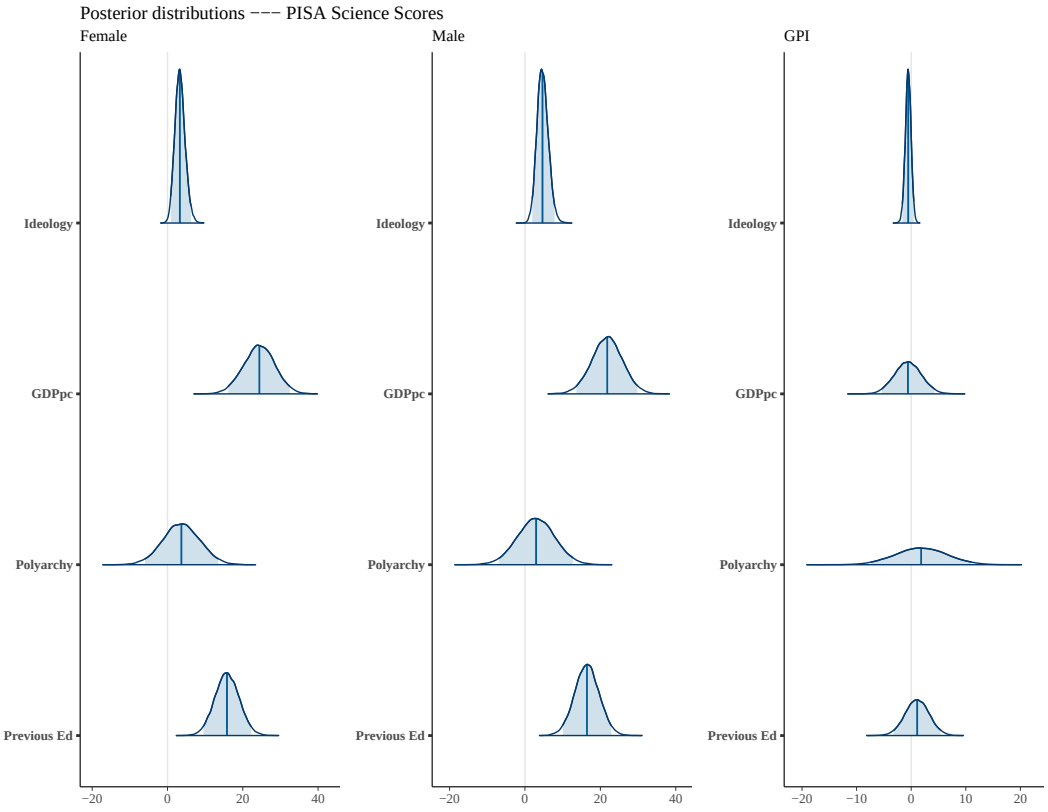

Figure D.7: Effect of party ideology on PISA science scores by gender.

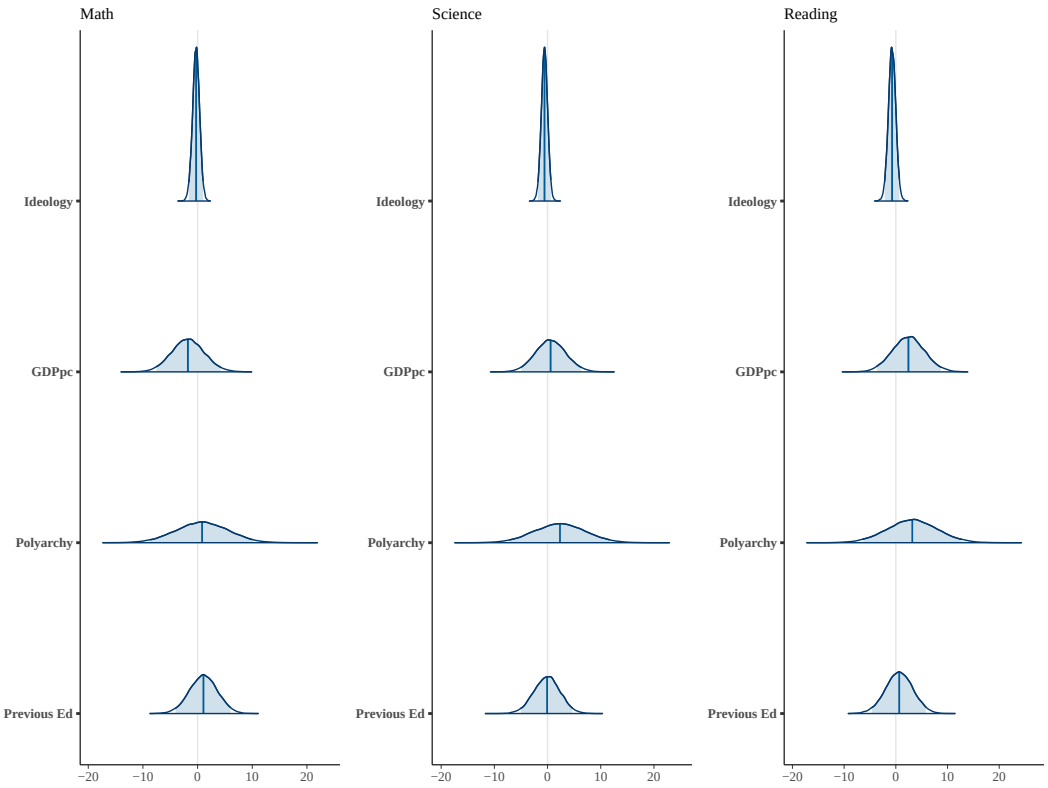

Figure D.8: Effect of party ideology on GPI for PISA scores — 10 year moving mean.

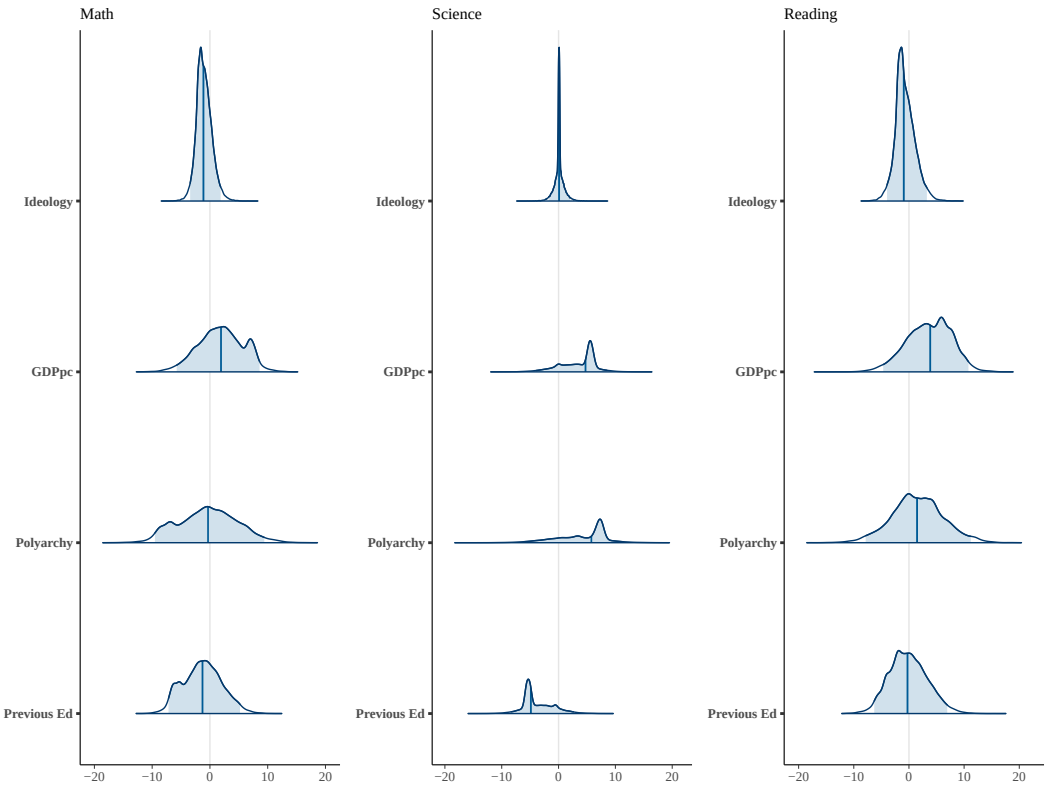

Figure D.9: Effect of party ideology on GPI for PISA scores — 5 year moving mean.

Appendix E

Bayesian Statistical Analysis

The most common framework for statistical inference is the "frenquentist" approach, so called because of the centrality of frequency distributions to its method. In this framework, the researcher makes assumptions about the process that generated observed data and attempts to answer question, "Given these assumptions, what is the probability of actually observing the data?" The goal of much academic statistical research is to estimate parameters that describe the data generating process. For example, a researcher may run a regression to estimate the effect of democracy on human capital development. In this framework, however, the researcher could only make the claim that, under repeated sampling, the true value of the estimated parameter would fall within a given range (the "confidence interval") some percentage of the time (often 95%). In any given sample, however, she would have no way of knowing if the estimated parameter was in the 95% or the 5%.

The Bayesian framework provides a contrasting approach. In this framework, the researcher takes a given (and known) set of data and attempts to answer the question, "Given these data, what should I believe about the process that generated them?" This approach has several advantages. First, the formulation of the question and the types of claims that can be made are more straightforward. The researcher can, for example, claim that there is a 95% chance that some range (the "credibility interval") contains the true value of the estimated parameter. Another advantage is that this framework allows the researcher to achieve an arbitrarily high degree of precision regarding the results, even in the presence of a small n.

Bayesian analysis is based on Bayes' formula:

$$P(A|B) = \frac{P(B|A) \cdot P(A)}{P(B)} \tag{E.1}$$

This formula provides a systematic way of updating beliefs about the world in light of new information. In inferential statistics, the interpretation of $(P|B)$ is the probability of some outcome, A, given some data, B. Unfortunately, we can never calculate the denominator of Equation E.1 directly. We simply do not (and cannot) know the probability of the data we have observed. To overcome this problem, we rely instead on the proportionally equivalent, $P(A|B) \propto P(A) \cdot P(B|A)$. In Bayesian terminology, this is understood to mean the posterior probability is proportional to the prior times the likelihood. In prose, this means that the probability of some outcome A happening, given that we have observed some data, B, is proportional to the probability of A ever happening times the probability that we should observe the data B *if* we already known A has happened.

In this framework, all of the probabilities are distributions, describing how the researcher believes about the likelihood of different values for the parameters before knowing the values of the data and how he or she *should* believe about those values after observing the data. That is, we can characterize our beliefs about the probability of different values for each parameter by multiplying our prior beliefs about that parameter by the likelihood of observing the data we observe, as specified by our model. Prior beliefs are allowed to be extremely vague, nearly to the point of complete ignorance, although completely uninformative priors are generally impossible to truly achieve.

Given the complexity of many models and the highly unintuitive, multi-dimensional distributions that result, the actual implementation of a Bayesian analysis relies on the intuition that we can learn the important characteristics of a distribution by drawing samples from it. We allow the computer to sample repeatedly from the posterior distribution and use that to characterize our beliefs. I implement the models using the Stan software and run sampling for 50,000 iterations.[1] I allow a 2,500 iteration burn-in period and then thin the

[1]Specifically, I run Stan through the package rstan in R. Section E.2 provides sample code using this

results by 5. My effective sample size varies by test and variable, but generally falls within a range of 35,000 to 45,000 (out of a theoretical 50,000 maximum). Standard tests confirm that all regressions converge for all sampled variables.

E.1 Priors

A common critique of the Bayesian approach is that results obtained depend on the priors used to model the process. This is true, but is perhaps an unfair criticism. With very strong priors, the model will learn slowly, leaving the researcher in charge of "finding" the results he expects. One way to overcome this problem is to use uniformative priors. This is precisely the approach that I take. My priors on the test score models are characterized as $\beta \sim N(0, 5)$ and $\sigma \sim cauchy(0, 2.5)$ so that the outcome variable is a draw from $y \sim N(\beta, \sigma)$. Figure E.1 shows these distributions.

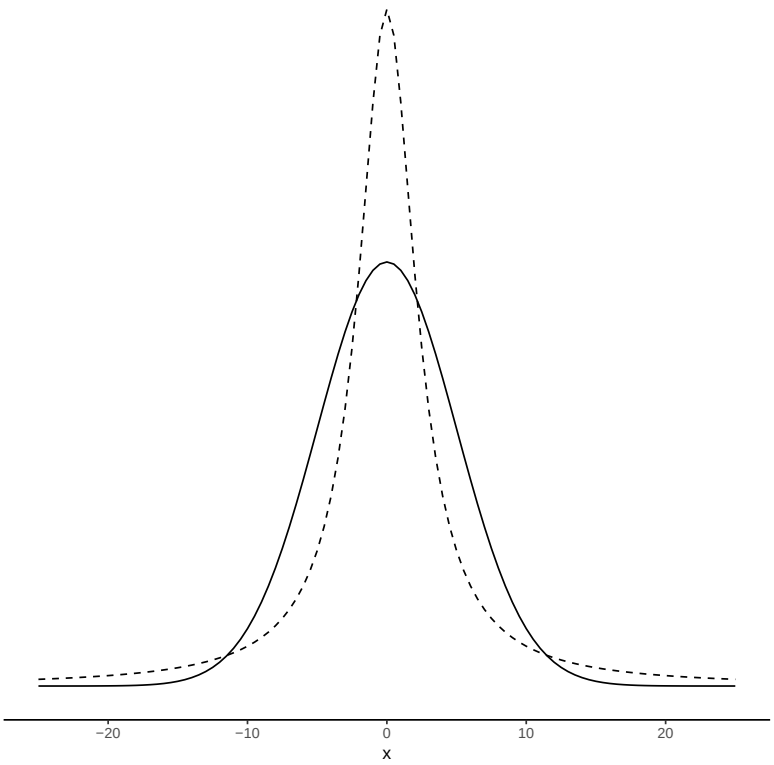

Figure E.1: Prior distributions used for β (solid line) and σ (dashed line).

framework.

The combination of a normal distribution for β and a cauchy distribution for σ produces vague priors. In other words, these weakly informative priors suggest a naive belief about the distribution of the relevant parameters. The specific values for the prior distribution parameters are chosen to match the appropriate scale for the outcome variables.

E.2 Sample Stan and R Code

Stan uses a Multi-Chain Monte Carlo (MCMC) algorithm called the no-U-turn sampler (NUTS), which is an adaptive variation on the Hamiltonian Monte Carlo (HMC) method to perform sampling. This approach varies from a "standard" approach in that it draws from a modified density, $p(\rho, \Theta) = p(\rho|\Theta)p(\Theta)$, where ρ is a multivariate normal distribution. The approach attempts to calculate the momentum of the target distribution and adjust accordingly in order to generate accurate posterior distributions.

The following code shows a typical model definition using Stan. The code is broken into four blocks: data, parameters, model, and generated quantities. The data and parameter blocks define mode inputs, including dimensions and restrictions on possible values. The "model" block specifies prior distribution beliefs and the likelihood function that is used to estimate all parameters. Finally, the "generated quantities" block specifies what values should be stored and, in this case, how to transform some of them for output.

```
// Stan code to model test scores as the outcome
data {
  int N; // number of observations
  int K; // number of covariates
  matrix[N, K] X; // covariate matrix
  vector<lower = 100, upper = 650>[N] y; // outcome vector
}
parameters {
  vector[K] beta; // the regression coefficients
```

```
  real<lower = 0> sigma; // the residual scale
}
model {
  // Define the priors
  beta ~ normal(0, 5);
  sigma ~ cauchy(0, 2.5);

  // The likelihood
  y ~ normal(X*beta, sigma);
}
generated quantities {
  vector[N] log_lik;
  vector[N] y_sim;
  for(i in 1:N){
    log_lik[i] = normal_lpdf(y[i] | X[i,]*beta, sigma);
    y_sim[i] = normal_rng(X[i,]*beta, sigma);
  }
}
```

Implementing the model within R is trivial. The following code block provides an example using PISA math scores as the dependent variable.

```
# some stan setup
Sys.setenv(USE_CXX14 = 1)
library(rstan)
library(shinystan) # must load to avoid multicore failure bug
rstan_options(auto_write = TRUE)
```

```
options(mc.cores = parallel::detectCores() - 1)


math_fit <- stan("Code/models/lac_test_scores.stan",
                 data = pisa_mat,
                 iter = 50000,
                 warmup = 2500,
                 thin = 5,
                 chains = 3)
print(math_fit,
      pars = c("beta"))
```

Appendix F

Analysis of Comparative Manifestos Project Quasi-Sentences on Education

The Comparative Manifestos Project (CMP) (Krause et al. 2019) provides a wealth of data on party manifestos in Europe since 1945 and a few Latin American countries over the past three decades. Many of these manifestos have been broken into quasi-sentence statements and hand-coded based on a wide range of relevant policy topics. Thus it is possible to see where parties stand on policy issues, officially, at elections. This creates the opportunity to study whether parties are converging or diverging in their official positions.

Still, such a study presents several significant challenges. First, the number of quasi-sentences is large: in the European sample there are over 62,000 statements on education. Additionally, these manifestos are provided in 38 different languages. No single researcher is likely to be able to study these in a systematic way. Luckily, recent advances in machine learning and natural language processing (NLP) make this a tractable problem. I use a neural network to embed entire sentences in a representation space capable of encoding in 93 languages. I then calculate the similarity of the embedded sentences between competing parties in each election to show that left and right are converging in their education rhetoric. This appendix describes the methodology behind the analysis.

F.1 NLP and Sentence Embeddings

NLP has grown by leaps and bounds in recent years due to the availability of both enhanced methods and ever greater (and cheaper) computing power. Central to all NLP problems is the need to represent language in some kind of numerical vector format. The simplest such methods is a "bag of words" approach. This method generates a list of all

words and counts the number of appearances of that word in a given text.[1] Bag of words approaches are simple to implement, but lose all information about the order and context in which words appear and generally cannot handle the introduction of new words after the initial encoding.[2]

A second simple approach is to use a "dictionary" in which every unique word is mapped to a numerical value. To illustrate, consider the rudimentary sentence "I am a scientist." Using this dictionary:

```
{'a': 1,
 'am': 2,
 'i': 3,
 'scientist': 4}
```

the sentence could be represented as a vector `[3, 2, 1, 4]` for a computer to process. The dictionary approach preserves information about word syntax and is appealing in that it can be reversed to construct meaningful language. In the example above, it is a trivial task to convert the numerical vector back into the sentence. However, dictionary methods have inherent limitations, including the ability to handle only individual characters or words.[3] Dictionaries can also only handle words contained in their original creation. Processing the sentence "I am a political scientist" using a model based on the dictionary above, for example, would have to discard the word "political." Additionally, dictionaries can only be used on a subset of NLP problems. They cannot, for example, be used to generate text because machine learning and NLP models that process dictionary-based language vectors will produce non-integer values as output, which contain no interpretable meaning.

[1] A "text" here could be a sentence or a longer document.

[2] In other words, the vocabulary used in training a bag of words model cannot be expanded when the model is applied to new data.

[3] There is no theoretical restriction against creating a dictionary of sentences, but such an embedding would contain no meaning and the number of distinct sentences would be far too large to be useful.

To overcome these limitations, researchers have moved toward more complex language representations. Most of these methods also rely on dictionary embeddings during their initial stages: language *must* be converted to numerical values for any computer processing. They move beyond these rudimentary representations, although, in learning complex relationships between language elements. Many of these methods are "unsupervised" in that they require no labeled training data. Instead, the computer "learns" the relationship between words or sentences on its own.

Cutting edge research in this area focuses on the power of "neural networks" to produce representations of arbitrary length. Perhaps the best known model in this area is Google's word2vec method, which encodes individual words in a vector space, usually of 100–500 dimensions. This model has been shown to have strong abilities across a range of language-related problems (Mikolov et al. 2013). More recent researchers have attempted to move beyond this model. One important step was provided by Kiros et al. (2015), who generated a very similar approach that encodes entire sentences. Their model built on the strengths of word2vec, but increased the network's ability to "understand" human language. The LASER model employed here (Artetxe and Schwenk 2019) is a further refinement in which entire sentences across many languages are embedded in a common vector space.

NLP neural nets have been applied to a wide range of problems including classifying texts, identifying language structures and parts of speech, translating between languages, generating new text *sui generis*, automatically captioning images, calculating semantic similarity, and more.

F.1.1 Neural Networks

Neural networks are complex mathematics structures that are relatively easy to understand. They were inspired by the human brain, but have since moved past that analogy. Originally posited in McCulloch and Pitts (1943), neural networks did not become tractable until an advance by Rumelhart, Hinton, and Williams (1985) overcame a fundamental problem of training networks in which they would not learn. Recent advances in computing

have made the calculations required feasible in a reasonable amount of time, leading to an explosion in research in the area.

The fundamental unit of a neural network is the "cell." Neural cells can have different architectures, but the most common one is the "perceptron." Simply put, a perceptron takes an input and produces an output. The first crucial aspect of the neural architecture is a probabilistic element to whether or not the perceptron "fires" (activates and produces an output).[4] Figure F.1 illustrates a perceptron.

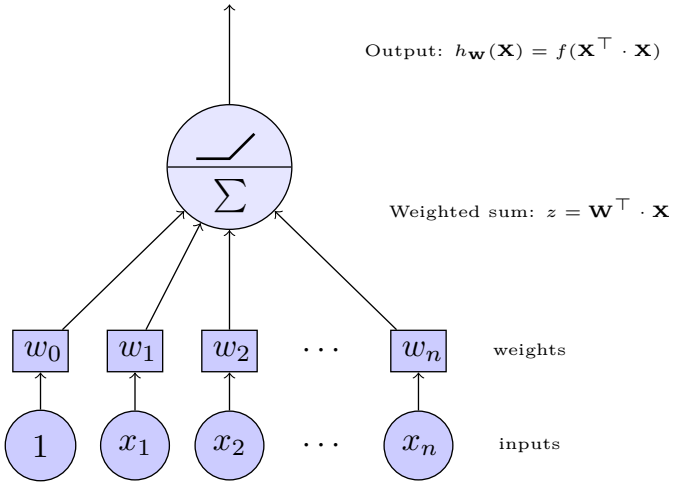

Figure F.1: A simple perceptron — the building block of a neural network.

The perceptron takes an arbitrary (but pre-defined) number of numerical inputs and multiplies each by a given weight.[5] The weighted inputs are then aggregated (with a simple summation function) and fed into the activation function, $h(\cdot)$. The researcher can select an appropriate activation function, but the logistic function and hyperbolic tangent function[6]

[4] A variety of functions exist for determining if a single neuron fires.

[5] Note that a fixed input of 1 is also fed into the perceptron. This value is generally referred to as the "bias" and is equivalent to including an intercept term in linear regression.

[6] The hyperbolic tangent function is defined as $tanh(z) = 2\sigma(2z) - 1$, where σ is a constant hyperparameter, generally set based on the number of inputs and outputs. Early researchers used a step activation function, but found that it trained slowly because the step function is non-differentiable, resulting in backwards passes that did not learn.

are common choices. The perceptron outputs a value then activates (or not) depending on whether the calculated value of the activation function crosses the activation threshold.

A "neural network" takes at least two multiple neurons, arranges them in "layers," and connects the layers. The simplest neural network consists of two layers, where the input of the second layer is the output from the first. Many neural networks rely on "dense" (or "fully-connected") networks in which every cell in one layer is connected to every cell in the subsequent layer. Most neural networks also include at least one additional "hidden" layer between the input and output layers. Networks that contain multiple hidden layers are called "deep" networks. Figure F.2 illustrates a simple network with one hidden layer.

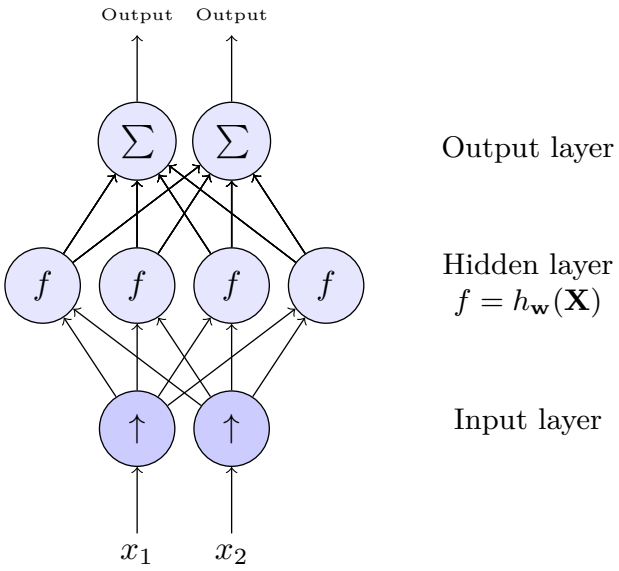

Figure F.2: A simple multi-layer perceptron network.

This fully-connected network consists of an input layer, a single hidden layer of four perceptrons, and an output layer. The input layer simply passes the input values into each perceptron. Each perceptron performs its function as described above.[7] Finally, the output layer sums the output from the hidden layer.

[7]Note that for simplification of visual presentation, the bias input and weights have been excluded.

The second crucial aspect of the neural architecture is a feedback mechanism by which the network "learns." Training data is first passed through the network as described above. Then, the output value is compared against the expected output value to calculate the "error." Working backwards through the network, the percentage that each cell played in producing the error is calculated and the weight for that cell is adjusted to correct the predicted output. By exposing the network to sufficient training data, weights are tuned so that the ultimate output is an accurate representation of the input. In many circumstances, the output is in a reduced form from the input. For example, a classification problem would take a large number of variables as input and produce a single output — the predicted class. Other networks sequentially reduce the number of neurons in the first half of layers, and the increase them again in the second half — translation networks, for example, work in this manner.

F.1.2 Neural Networks and Language Representation

Many early language models represented language as words drawn randomly from a probability distribution of all words. The well-known Wordfish program, for example, models language in this fashion (Slapin and Proksch 2008). More recent NLP approaches attempt to take into account the context in which a letter or word appears in order to predict other words or letters around it. In other words, these models view language as an ordered sequence of inputs and allow a computer to learn to recognize patterns of words better by studying the sequences themselves.

This approach requires a modified cell structure — cells must have some kind of "memory" to consider both current and past input in order to model the sequential nature of language. Perceptrons are not capable of this. Several alternative cell structures exist, but one of the highest performing ones is the "long short-term memory" (LSTM) cell. In the most general sense, an LSTM cell takes standard input, along with a short-term state input (that conveys cell state from immediately preceding data) and a long-term state input (that conveys cell

state from more distant preceding data). It then produces a standard output, and the short-term and long-term states that will be fed into the cell along with the subsequent data. Figure F.3 illustrates this architecture.

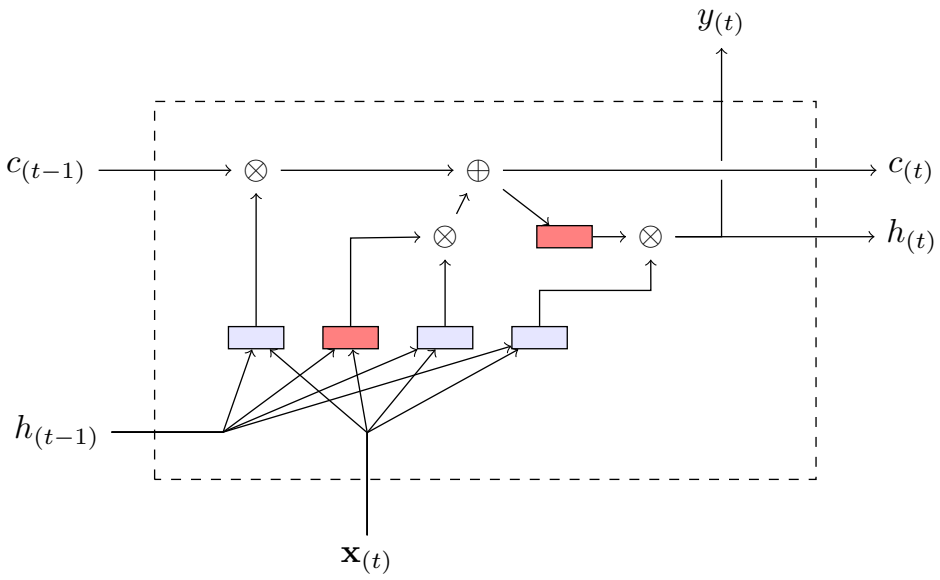

Figure F.3: A long short-term memory cell. Blue rectangles represent logistic functions and red rectangles represent hyperbolic tangent functions. $\otimes$ is the element-wise multiplication operator and $\oplus$ is the element-wise addition operator.

Data, $\mathbf{x}_{(t)}$, is fed into the cell and an output, $y_{(t)}$, is produced. h as the short-term memory and c can be viewed as the long-term memory. Thus, $h_{(t-1)}$ and $c_{(t-1)}$ are the short- and long-term states from the previous iteration, respectively. Tracing the path of the data, the output is generated by considering both short- and long-term states (which have already been modified with the new data) along with the new data itself. The new short term state is equal to the output of the cell.

F.1.3 LASER

In order to embed the quasi-sentences from CMP, I use the Language-Agnostic Sentence Representations (LASER) network, which was designed and recently made available to the public by Facebook AI (Artetxe and Schwenk 2019). This network has several desirable

properties for the problem of encoding CMP sentences. First, it creates language-agnostic embeddings for sentences from any of 93 languages. Most other language models are built around one or two languages. The model is trained using pairs of translated sentences, but by exposing the model to many language pairs, it learns a language-agnostic embedding. Second, the embeddings are high-dimensional, allowing for a very complex language model and accurate embeddings. Figure F.4 illustrates the network architecture.

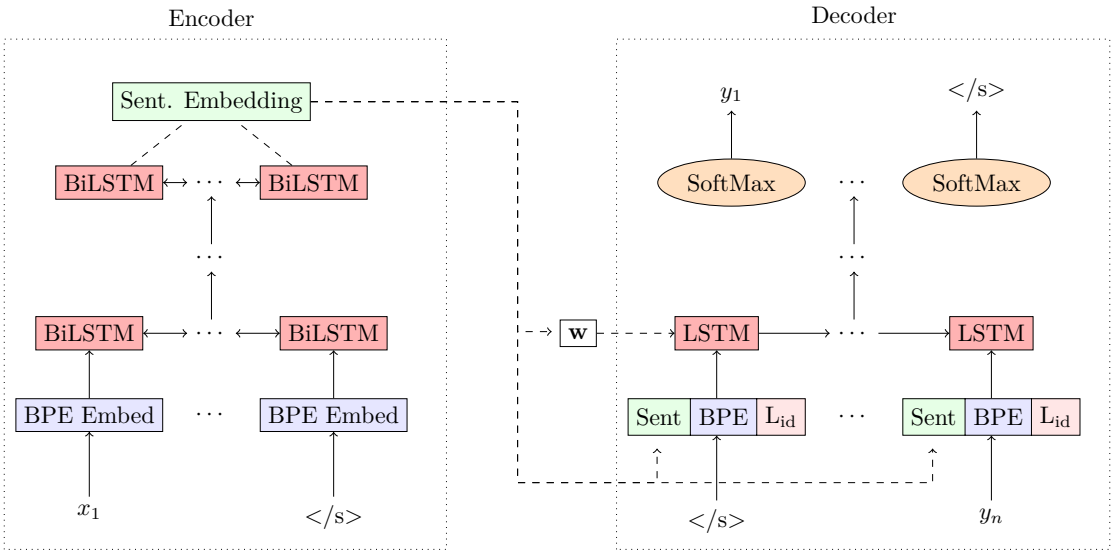

Figure F.4: LASER Network

Light blue rectangles are the input layer where sentences are encoded using a byte-pair encoding scheme. These encodings are then fed into a 5-layer dense bi-LSTM network. This network differs from the LSTM described above in that it is bi-directional. In the uni-directional model, the sequence of words is fed into the network in one direction. The bi-directional network used in LASER looks at sentences both forwards and backwards.

The LASER network follows the general architecture of a translation network. It is trained with an encoder — which translates sentences into computer encodings — and a decoder — which translates those same encodings back into words. Both encoder and decoder networks consist of five layers of LSTM cells. The decoder differs slightly in that it uses the

uni-directional LSTM cells and is trained on the embedded sentence from the first language, the byte-pair encoding of the sentence from the second language, and a language identifier. The network uses a final "SoftMax" layer to aggregate output and produce a prediction. The softmax, or normalized exponential function, takes an input vector and normalizes it into a true probability distribution.

Note, too, that the order of the words in a sentence is reversed between the two halves of the model. The special sentence-ending token "</s>" ends the sequence for the encoder, but starts it for the decoder. As a result of this flip, the final output sentence is in the correct direction.

Facebook provides a pre-trained version of this model that opens the possibility of encoding an arbitrary number of sentences in its network and using those embeddings in a range of NLP problems.[8] Encoding arbitrary sentences is the task required here.

F.2 Similarity of High Dimensional Sentence Representations

High-dimensionality is a virtue of the LASER encoder, but it is also a limitation. Many calculations that work in low-dimensional space fail when dimensions increase. This "curse of dimensionality" (Bellman 1961) is well documented and is particularly acute for distance metrics (Aggarwal, Hinneburg, and Keim 2001). A well-known distance metric is the Euclidian distance. This is the distance between two points on a cartesian plane following a line "as the crow flies." The Manhattan distance (the shortest path between two points using only orthogonal lines, named for the intuition that this is how one travels through a city grid) is another common measure. As the number of dimensions increases, these distance metrics become bound by unknown constants and lose their ability to describe how similar

[8]The public provision of the trained network, and not merely the code, is crucial. Facebook AI reports that training was performed on 233 *million* sentences (all of which were translated across two languages) and that they "train on 16 NVIDIA V100 GPUs with a total batch size of 128,000 tokens…for 17 epochs, which takes about 5 days" (Artetxe and Schwenk 2019). By way of explanation of scale, a single NVIDIA V100 is capable of performing over 100 TFLOPS (1 TFLOP is 1 trillion floating point calculations per second). This means the network required approximately 6.912×10^{18} total calculations to train.

(distant) two observations are (Singh Bhatti 2018).

One approach to overcome this limitation is to use the cosine similarity as a metric for similarity between vectors. Instead of attempting to measure the distance between two points (as in the case of Euclidian or Manhattan distance measures, for example), the cosine similarity measure the *angle* between two vectors. It takes values in the range $[-1, 1]$ where a value of -1 corresponds to two diametrically opposed vectors and 1 to identical vectors. This also implies that orthogonal vectors receive a value of 0.

There is an inherent problem here in that it is not clear what a "diametrically opposed" or "orthogonal" vector for sentence embeddings might be. Nonetheless, the intuition holds that higher cosine similarity values corresponds to greater similarity between sentences.

The cosine similarity between two vectors, $\mathbf{A}$ and $\mathbf{B}$ is calculated as

$$\begin{aligned} cos(\Theta) &= \frac{\mathbf{A} \cdot \mathbf{B}}{\|\mathbf{A}\| \, \|\mathbf{B}\|} \\ &= \frac{\sum_{i=1}^{n} A_i B_i}{\sqrt{\sum_{i=1}^{n} A_i^2} \sqrt{\sum_{i=1}^{n} B_i^2}} \end{aligned}$$

where Θ is the angle between the two vectors.

F.3 Validation

Does this approach produce valid estimates of the differences between sentences? The authors of LASER demonstrate its applicability in a wide range of NLP problems (Artetxe and Schwenk 2019). They do not, however, test it on a semantic similarity problem (as is the case here). I provide a preliminary validation check using data from the International Workshop on Semantic Evaluation (SemEval).[9] This (approximately) bi-annual conference provides sentence pairs with hand-coded gold standard similarity scores.

[9]Note that as invaluable as this data source is for validating this approach, it is limited in that all the sentences pairs are in English. The LASER encoder performs well in the other languages used in this analysis (see ibid.). Other options could only be considered if they can encode both the languages of interest (Spanish and Portuguese) *and* English.

I process the sentences from SemEval and embed them using the LASER encoder. The correlation between the gold standard similarity scores and the cosine similarities of LASER sentence embeddings is 0.67. This value suggests that while the power of the embeddings in this task is imperfect, it performs at a sufficiently high level for drawing conclusions about the similarity of manifesto statements.

A concern with this approach is that even using the cosine similarity as a distance metric will result in very high values for semantically opposite sentences. This is a valid concern. The sentences "Education is important and we should spend more on it" and "Education is not important and we should spend less on it" have a cosine similarity of 0.91390. These pairs of sentences obviously have opposite meanings but still appear very similar. Consider a pair of sentences more clearly not related: "This morning I made a cup of coffee" and the opening to *A Tale of Two Cities*:

> It was the best of times, it was the worst of times, it was the age of wisdom, it was the age of foolishness, it was the epoch of belief, it was the epoch of incredulity, it was the season of Light, it was the season of Darkness, it was the spring of hope, it was the winter of despair, we had everything before us, we had nothing before us, we were all going direct to Heaven, we were all going direct the other way – in short, the period was so far like the present period, that some of its noisiest authorities insisted on its being received, for good or for evil, in the superlative degree of comparison only. (Dickens 2003, p. 5).

These sentences have a cosine similarity of 0.30590. Despite their differences, they still have a positive similarity (recall that diametrically opposed vectors have a cosine of -1). Still, it is an important point of comparison. The results presented in the main text and below have cosine similarities that fall in the approximate range 0.25 to 0.5.

As another point of comparison, consider two manifesto statements from the 2005 Chilean presidential elections. The first is from Michelle Bachelet's Concertación: "Para lograr ese objetivo central necesitamos invertir más en educación" (To achieve this central objective we need to invest more in education). And from Sebastian Piñera, the candidate for the RN that

year, “En el plano del acceso a la educación, piedra angular de la igualdad de oportunidades, las iniquidades son abismales” (At the level of access to education, the cornerstone of equality of opportunity, the inequalities are abysmal). The cosine similarity between these statements is 0.55321

F.4 Results

Figure F.5 shows the results of the analysis for manifesto statements on education and equality for both Latin American and European samples. The Latin American sample includes Argentina, Bolivia, Brazil, Chile, and Mexico. The “European” sample is made up of observations from Armenia, Australia, Austria, Belgium, Bosnia-Herzegovina Bulgaria, Canada, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Georgia, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Latvia, Lithuania, Luxembourg, Moldova, Montenegro, Netherlands, New Zealand, North Macedonia, Norway, Portugal, Russia, Serbia, Slovakia, Slovenia, South Africa, Spain, Sweden, Switzerland, Turkey, the United Kingdom, and the United States.

Each point represents a pair of parties in an election for which data exists. The X-axis measures the ideological difference (RILE) between the parties, as calculated by the CMP (Krause et al. 2019). The Y-axis measures the average distance between policy statements for the pair of parties in the election year. Solid lines show mean statement differences regressed on ideological difference. The blue points and blue line show policy statements related to equality and the red points and line show policy statements on education.

The results here are interesting and surprising for several reasons. First, the European sample shows results in keeping with expectations. The downward sloping lines suggest divergence on education and equality: as parties grow more ideologically distant, their statements on these topics become more dissimilar. However, the relationship is not statistically significant. We can interpret this as suggestive evidence that there is manifesto divergence between left and right on education and equality in these countries, but the relationship is

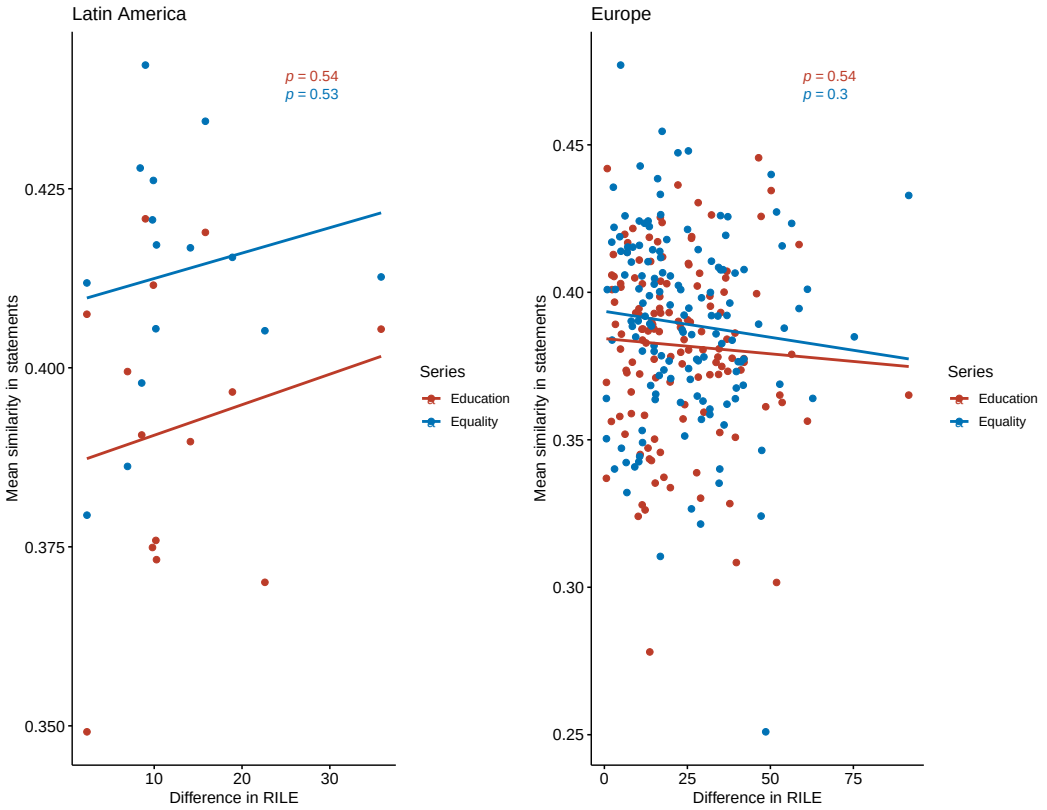

Figure F.5: Manifesto statements and partisan ideology. Latin American sample in the left plot, European sample in the right.

weak at best.

Second, the Latin American sample is suggestive of convergence on *both* education and equality. The latter finding is particularly surprising, given the foundational nature of equity to the left and right. There are two possible explanations for this finding. One is that statements on "equality" are not equivalent to those on "equity." There is no doubt that the two concepts are distinct and they cannot be substituted for one another. The second possibility is that in the context of very high and persistent inequality in Latin America, right parties are simply forced to express a greater degree of support for equitable policies than in other regions.

As with the European sample, neither relationship in Latin America is significant. In this case, however, the findings support the belief that there is convergence between left and

right.

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